САНКТ-ПЕТЕРБУРГСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
ST. PETERSBURG STATE UNIVERSITY

ЧИТСКЕ ЛЕОНОРЕ МАРЛИНДЕ ВИЛЬДЕРВАНК
TJITSKE LEONORE MARLINDE WILDERVANCK

Выпускная квалификационная работа / Master's Thesis

ЗАВИСИМОСТЬ ЕВРОПЫ ОТ РОССИЙСКОЙ ЭНЕРГИИ

EUROPEAN DEPENDENCE ON RUSSIAN ENERGY

Уровень образования / Education level: магистратура / graduate
Направление / Major: 41.03.05
Международные отношения / International Relations
Основная образовательная программа / Programme: Международные отношения (на английском языке) / International Relations (in English) MIR

Научный руководитель / Supervisor:
доцент кафедры европейских исследований, кандидат политических наук
Ланко Дмитрий Александрович
Dmitry A. Lanko, Associate Professor
Department of European Studies

Рецензент / Reviewer:
Докторант Александровского института университета Хельсинки
Франческо Дуранте
Francesco Durante, Doctoral Student
Aleksanteri Institute, University of Helsinki

Санкт-Петербург
St. Petersburg
2020

Аннотация. ЕС зависит от России как от основного поставщика, когда речь идет о нефти, газе и твердом топливе. Эта зависимость является важным фактором в энергетической политике ЕС. Несмотря на то, что в энергетических отношениях между ЕС и Россией существует взаимная зависимость, ЕС опасается сбоев в торговле энергией. Это отражается в политике ЕС, которая с 2009 года проводится на европейском уровне в дополнение к национальной политике. Основой энергетической политики ЕС является диверсификация источников энергии, уменьшение зависимости и стремление к коллективному европейскому подходу. Достижение последнего оказывается сложным, поскольку зависимость от российской энергии глубоко разделяет ЕС. Исходя из своих прошлых и экономических целей, государства-члены ЕС по-разному относятся к намерениям России. Тем не менее, события 2014 года, похоже, изменили общую европейскую перспективу, и с тех пор в ЕС стало больше единства. В конечном счете, безопасность энергоснабжения, а вместе с этим и будущее Европы, поставлено на карту.

Ключевые слова: Энергетическая политика, Геополитика, Европейский Союз, Россия, Нефть, Природный газ, Ископаемое топливо, Торговля энергией

Abstract. The EU is dependent on Russia as main supplier when it comes to oil, gas and solid fuels. This dependence is an important factor in the energy policies of the EU. Although there is a mutual dependence in the energy relationship between the EU and Russia, the EU fears disruptions in the energy trade. This is reflected in EU policy that, since 2009, has been made at a European level in addition to national policies. The core of EU energy policy is diversification of energy sources, decreasing dependence and a desire for a collective European approach. The latter proves difficult, as dependence on Russian energy has deeply divided the EU. Based on their past and economic motives, member states have different feelings towards Russia's motives. Nevertheless, events in 2014 seem to have changed the common European perspective and there has been more unity within the EU since. After all, the security of energy supply, and with that the future of Europe, is at stake.

Keywords: Energy policy, Geopolitics, European Union, Russia, Oil, Natural gas, Solid fuels, Energy trade

Содержание

Table of contents

Introduction

European dependence on Russian energy is an important factor in the energy policies of the European Union (EU). Former Vice-President of the Energy Union, Maroš Šefčovič, referred to this during the meeting of the European Parliament's Delegation to the EU-Russia Parliamentary Cooperation Committee as "Energy plays a pivotal role in our relations with Russia, and Russia plays an important role in our energy policy. In fact, energy has been a cornerstone of our economic relations with Russia."[1]

For nearly five decades, gas and oil trade and to a lesser extent solid fuel trade, have been a key feature of relations between (Soviet) Russia and several European states. In the 1960's, the Soviet Union started to export large amounts of energy through pipeline systems. In the beginning, it was sent to European Comecon states (the economic organization under the leadership of the Soviet Union, better known as the "Eastern Bloc"), but later they shipped it to Western Europe as well, including members of the European Community and NATO. The strategic relevance of Russia as energy supplier increased during the global oil crisis in the 1970's. After the dissolution of the Soviet Union, East-West energy trade intensified as Russia inherited the role of Europe's main energy supplier because most of the energy reserves and extraction facilities are located far away in Russia's hinterland.[2]

Energy is closely related to geopolitics. In energy policy, geopolitical power is defined as the state's capacity to gain control of national energy resources and transportation infrastructure, and to use or adjust them as a means to pursue foreign and security policy goals. This means that due to deployments of geopolitical power, economic motivations are subordinate to political goals.[3] This is in particular the case for gas and oil trade. International conflicts have often disrupted international oil transactions. The first time this happened was in 1956, when European oil imports were hampered by the Suez crisis. The temporary closure of the Suez Canal was a result of the conflict between the United Kingdom (UK) and France on one side and Egypt on the other. When the Organization for Petroleum Exporting Countries (OPEC) boycotted the oil transport to Western countries in 1973, it was the second international oil crisis, but it became known as 'the First Oil Crisis.' A new crisis happened a couple of years

[1] "*Speech: The state of play of EU-Russia energy relations,"* Europa Nu, published 25 March 2015, accessed 23 May 2020, https://www.europa-nu.nl/id/vjsjjrbvpiyy/nieuws/speech_the_state_of_play_of_eu_russia?ctx=via2fu30lxxr

[2] Siddi, Marco, "The Role of Power in EU-Russia Energy Relations: The Interplay between Markets and Geopolitics," *Europe-Asia Studies* Vol. 70 (2018): 1552-1571.

[3] Idem.

later in 1979 due to a power change in Iran. These crises led to price increases with negative economic consequences for oil importing countries. This resulted in a search for new oil fields in Europe and the United States (U.S), which proved later successful. Strategic oil stocks were set up to allow some months' supply in case of new trade disruptions and the dependence on OPEC considerably decreased.[4]

By contrast, the gas market had been a regional matter for a long time. Gas pipelines are not build overnight and once the system lays down both consumer and supplier have a mutual interest in the proper functioning of these pipelines. Nevertheless, the history over the past 15 years has shown that political tensions are also rising in the gas trade, for example between Russia and Ukraine where the renewing of gas transportation contracts has led to disruptions in gas transit from Russia to Europe. The dispute between both states exposes Europe's vulnerability concerning energy security as they feel the consequences of geopolitical situations elsewhere. Within the EU, gas trade has become a main source of controversy and it is one of the most politicised topics, despite its lesser economic role compared to European oil trade. The topic has deeply divided European member states. Fueled by a long history of Tsarist and Soviet domination, Eastern European states have a mistrust regarding Russia as main energy supplier, while Western European states have a more pragmatic look on the issue and see opportunities in EU-Russian cooperation. This does not alter the fact that since the start of the conflict in Ukraine in 2014, fears about possible disruptions in the energy trade with Russia have increased, in particular with respect to gas trade as the transport through expensive pipeline systems creates a more vulnerable relation than the oil trade that is sold by barrels.[5]

Due to the closure of domestic coal and nuclear power stations, the demand for gas in the EU is expected to increase in the coming years. Extra import capacity is needed in order to meet this extra demand. This capacity increase is available in the form of liquefied natural gas (LNG) import terminals and expansion of pipeline capacity for Russian gas. The advantage of LNG over the traditional transportation of natural gas is the commercial opportunity because expensive pipeline systems are not necessary as LNG is transported overseas from locations where gas deposits are in excess. However, the relative high costs of production and the need to store it in special tanks have hindered the widespread commercial use so far. The future of the EU gas markets depends on a few pipeline projects. Currently under construction are the Turk Stream pipeline and North Stream 2. The Turk Stream pipeline will replace the previously

[4] "*Energy is and stays geopolitics,"* Energie Podium, published 8 January 2020, accessed 21 May 2020, https://energiepodium.nl/artikel/energie-is-%C3%A9n-blijft-geopolitiek-gevoelig
[5] Idem.

planned Southstream pipeline allowing gas to be transported directly from Russia to Turkey. North Stream 2 allows gas transportation directly from Russia to Germany, bypassing several transit states. Both pipelines are controversial as they increase European dependence on Russian energy. Critics emphasize the strategic importance of energy exports for the geopolitical position of Russia.[6]

Typically, the EU is portrayed as a liberal actor in external energy policies, whereas Russia is seen predominantly as a geopolitical or realpolitik-driven player. This ignores the EU's regulatory power, which is defined as the ability to formulate, monitor and enforce a set of market rules in a jurisdiction. The EU is the world's largest integrated energy market and besides, it contains the European Commission which has a clear and strong enforcement capacity in amongst others the energy sector. In this respect, enforcement capacity is essential as foreign authorities will have to adapt to regulations. Enforcement tools backing up regulatory power may include penalties such as fines or exclusion from a market. Thanks to its regulatory institution and its enforcement powers, the EU arguably increased its ability to shape international market rules in line with its preferences.[7]

In her article "Is Russian Energy Policy towards the EU only about Geopolitics?" Tatiana Romanova claims that Russian energy policy is undeniably linked with geopolitics. She states that it becomes clear from strategic documents that energy is perceived for a strategic course. In Russian policy, security is giving privilege above the market and includes state interference, top-down problem solving and ad hoc solutions. Furthermore, she argues that in Russian policies, energy is used as a tool to boost internal development and maximize its presence in the global economy. Subsequently, she nuances her views by stating that is it too simplistic to only consider geopolitical motives. She concludes that Moscow indeed used legal and technocratic instruments that fit in the European market approach.[8] Marco Siddi, Senior Research Fellow at the Finnish Institute of International Affairs and expert in EU-Russian energy relations partially agrees with her. He argues that EU-Russian energy relations are rather commercial than geopolitical because there have been commercial benefits for both sides. According to Siddi, the EU has proven to be more effective as a regulatory power than as a geopolitical power. The European Commission has been able to influence the planning of new infrastructural projects and even limited Gazprom's monopolistic practices. This proves that

[6] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 116.
[7] Siddi, Marco, "The Role of Power in EU-Russia Energy Relations: The Interplay between Markets and Geopolitics," *Europe-Asia Studies* Vol. 70 (2018): 1552-1571.
[8] Romanova, Tatiana, "Is Russian Energy Policy towards the EU only about Geopolitics? The Case of the Third Liberalisation Package," *Geopolitics* 21:4 (2016): 857-879.

currently regulatory power and market forces are the most influential drives of EU-Russia energy relations. He concludes that energy dependence between the superpowers works as interaction, as Russia is the most important energy supplier of the EU, the European market is vital for Russia's energy revenues.[9] Umut Turksen, author of the book "EU Energy Relations with Russia" has opposing views. According to him, the EU has endeavored to cooperate with Russia through bilateral and multilateral platforms, but that Russia continuously resisted these initiatives. Contrary to Romanova and Siddi, Turksen concludes that EU's normative and intuitionalist approach is undermined by Russia's state practices. He continues that there is no mutual dependence given the fact that the EU has not managed to diversify its energy sources and suppliers.[10] The EU itself shares the same conclusions as Turksen. The European Parliamentary Committee on Foreign Affairs (AFET) conducted a study about energy as a tool of foreign policy. In their eponymous report, they conclude that Russia's energy policies are shaped by geopolitical motives as well as commercial considerations. Although the policies do not solely serve Russia's foreign policy objectives, Russia is able to exert political pressure through energy exports.[11]

Although the European dependence on Russian energy has been researched extensively, this thesis attempts to link long-term trends in combination with the current state of affairs. This link is relevant since this dependence is frequently discussed in European politics, but often in combination with current geopolitical relations. Here one responds to emotion without actually taking into account the long-term trends. Research into these trends can provide more insight into the relationship between the EU and Russia with regard to energy. From a European perspective, it is therefore particularly useful to understand the extent to which the EU is really dependent and what possible alternatives exist. That the topic is relevant is evident from the numerous debates in the European Parliament about the European diversification strategies with regard to EU energy imports.[12] In addition, there is a debate in both the academic world and on the European political scene in which is argued, on the one hand, that Russian energy policy is actively pursuing influence. They associate Russia's energy policies with state control and

[9] Siddi, Marco, "The Role of Power in EU-Russia Energy Relations: The Interplay between Markets and Geopolitics," *Europe-Asia Studies* Vol. 70 (2018): 1552-1571.
[10] Turksen, Umut, *EU energy relations with Russia: solidarity and the rule of law* (London: Routledge, 2018), 75.
[11] "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament, 35.
[12] Debate: "State of EU-Russia political relations," European Parliament Strasbourg 11 March 2019, https://www.europarl.europa.eu/doceo/document/CRE-8-2019-03-11-ITM-023_EN.html

geopolitical ambitions. On the other side of the debate, scholars are convinced that it is a question of mutual dependence in which the EU has as much power, if not more, than Russia. Based on the above, the following research question has been formulated: How is the European dependence on Russian energy characterized and how is this reflected in European energy policy?

The timeframe of this thesis is between 2005 and 2017. Twelve years seems to be a relatively short period of time to investigate long-term trends, but it offers a sufficient scope to study them. In addition, the EU expanded in 2004 with no fewer than ten new member states. Eight of these member states were part of the former Warsaw Pact and with their arrival in the EU, the energy landscape changed drastically. Moreover, in 2005 for the first time, real concrete steps were taken to formulate a common European energy policy.[13] Finally, all relevant data related to European energy imports is only up to 2017 and newer date is unfortunately not yet publicly available.

For this research, data, primary sources and secondary literature will be used. The data comes from Eurostat, the statistical office of the EU. The main primary sources are policy documents and scientific reports. The documents provide a detailed insight into the positions adopted by the EU with regard to Russian energy imports. Also (translated) Russian policy documents shall be used to gain insight into the Russian energy market. This thesis is analytical in nature, whereby sources and literature are examined critically. The use of news reports is limited as much as possible to keep the information as objective as possible. Nevertheless, for any text that will be used, it is important to keep in mind the author's perspective or potential agenda as it may affect what they write. Although efforts have been made to write this thesis as objective as possible, it is undeniable that it is written from a European perspective, given the number of sources from the EU.

In order to provide adequate answers to the research question, sub questions will be used. Firstly, the context of the European-Russian energy relationship will be discussed, focusing on the realization of the current energy policies and the legal framework. The North Stream pipeline will also be briefly discussed as a case study. The sub questions that belong to this chapter are: What is the context of EU-Russian energy relations? What is the legal framework of the EU-Russian energy relationship? The second chapter then discusses the European dependence on energy imports itself. In this chapter it becomes clear where the energy per European member state comes from and what the influence of Soviet legacy has on

[13] Green Paper: A European strategy for sustainable, competitive and secure energy," 8 March 2006, accessed 1 December 2019, Commission of the European Communities, 14.

this. The sub questions for this chapter are: Where does European energy originate from? What does dependence mean? How does Soviet legacy influence the current EU-Russian energy relationship? In the third chapter, European energy imports will be discussed in more detail, but only imports from Russia will be considered. In addition, efforts will also be made to explain the developments and attention will be paid to the current energy trends in the EU. The sub questions for this chapter are: What is the development of oil/gas/solid fuel imports from Russia of the EU between 2005 and 2017? How can this development be explained? What are the main energy trends in the EU society? This chapter will determine exactly how much energy of every sector (oil, gas and solid fuels) is imported from Russia per each member state and what its value is for the total European imports. Eventually, this entire overview can be found in the appendix. The last chapter turns away from the EU and zooms in on the Russian energy sector. The following sub questions will be addressed: How is the Russian energy sector organized? How does the Russian energy sector relate to Russia's domestic politics? How does the Russian energy sector relate to Russia's foreign politics? The emphasis in this chapter will lay on the interaction between the Russian energy sector and Russian domestic and foreign policies. Finally, in the conclusion the main findings will be summarized and an answer to the research question will be provided.

Theoretical remarks

Opposed to European energy policy, which is often described as market-based, Russian external energy policy is often described as geopolitical. In 1974, the phrase energy geopolitics was first used. Rooted in the neorealist tradition of international relations, the approach of energy relations focuses on power politics. It does not pay much attention to national politics or transnational relations. In this sense, energy is regarded as a strategic commodity instead of an average good. The geopolitical approach is based on top-down centralized decision making. This is related with the negative assumption of external dependence and the urge to control it. On the other hand, the market approach is based on the neoliberal understanding of international relations. This view assumes positive interdependence and the neoclassical market vision in which all problems of supply and demand are solved. This approach considers energy as commodity like any other. According to the neoliberal understanding, states act as rule-providers as long as they ensure universal and transparent rules. Neoliberals expect long-term and mutual cooperation, while neorealists presuppose competition. There is also a difference in how territories are considered. Neorealism is linked to territorial unites (where resources are

located, transported and consumed) and to traditional, static forms of organization, while the neoliberal approach is not territory-based and involves various transnational actors like consumers, markets and organizations.[14]

Context

The emerge of a European Energy Policy out of Hampton Court 2005

Despite several attempts during the 1990's, the EU did not succeed in creating a common energy policy. During the first decade of the twenty-first century, a new impulse for the formation of a common EU energy policy came about when a series of key documents such as green papers and action plans were published. During the UK Presidency of the European Council, British Prime Minister Tony Blair called an informal meeting for the Heads of State and Government of the European Union on 27 October 2005. The meeting took place at the prestigious Hampton Court Palace, less than 20 kilometers south west of central London. The meeting was arranged in order to discuss the 'future of Europe.' Prior to the meeting, the President of the Commission for European Communities (since 2009 the European Commission, also known as 'the Commission') José Manuel Barroso prepared a paper on the challenges of globalization. The paper was used as foundation of the themes discussed during the meeting: global competition, climate change, migration and of course energy.[15]

As follow up of the meeting, specific councils devoted to discussing these topics organized a number of debates in the aftermath of Hampton Court. In these various 'Hampton Court work streams,' the Commission and the EU member states shared initiatives and information on their efforts. The Energy Council meeting was held on the 1st of December 2005 and was devoted to the implementation of the internal energy market and its practical impact. The basis for this discussion was the Commission's report on the topic. The Council concluded that whilst supply remains limited, the world demand for energy would increase. The Council pleaded that in order to benefit from a broad range of energy sources, Europe had to diversify its sources of energy. Furthermore, because it was seen as relevant for the security of the supply, the council took in account the view of the challenges of global warming with special attention to low emission energy production and renewable energy sources. Finally, the Council

[14] Romanova, Tatiana, "Is Russian Energy Policy towards the EU only about Geopolitics? The Case of the Third Liberalisation Package," *Geopolitics* 21:4 (2016): 857-879.
[15] Bachtler, John and Mendez, Carlos, *EU Cohesion Policy and European Integration: The dynamics of EU Budget and regional policy reform* (London: Routledge, 2016), 212.

announced that the Commission would publish a Green Paper on a European Energy Policy in the upcoming spring.[16]

The paper was already released in the beginning of March 2006. It was written in order to develop a coherent European policy combining competitiveness, sustainability and security of energy supply. The Commission wanted to deliver a common European response to the new energy landscape of the 21st century. In their view, this new landscape would consist of an increasing import dependency, volatile energy prices, a strong growing global energy demand and global warming. The fundamental question the Commission had to answer was whether or not there was agreement amongst its member states on the need to develop a common European Energy Strategy and whether or not sustainability, competitiveness and security should be the core principles of that strategy. The six key areas of challenges they addressed are as follows: competitiveness and an internal energy market, diversification of the energy mix, solidarity, innovation and technology, sustainable development and a common external policy. The Commission pushed for an external policy as they believed it would enable Europe to "play a more effective international role in tackling common problems with energy partners worldwide."[17] Furthermore, they were convinced that an external energy policy would show member states' commitment to common solutions to shared problems and that it would be a break from the past. They mention the following benefits: securing and diversifying energy supplies, energy partnerships with produces, transit countries and other international actors, reacting effectively to external crisis situations, integrating energy into other policies with an external dimension and finally to have energy as a tool to promote development.

These benefits for energy partnerships are worth a more detailed explanation. The EU and its energy partners are interdependent, which is reflected at specific EU energy dialogues with several producer and transit countries at bilateral and regional level. In the report, the Commission especially mention that the initiative of an external energy policy would be particularly desired in regard with the EU's most important energy supplier, Russia. They mention Russia as "an essential and equal partner"[18] in this relationship. With the implementation of a common policy, the Commission wanted to mark a step change in this energy partnership at both community and national level. The Commission wanted to offer

[16] "Interim report on the follow up to the informal meeting of Heads of State and Government at Hampton Court," 7 December 2005, accessed 1 December 2019, Commission of the European Communities, 2-7.
[17] "Green Paper: A European strategy for sustainable, competitive and secure energy," 8 March 2006, accessed 1 December 2019, Commission of the European Communities, 14.
[18] Idem, 15.

predictability and security for both parties, fair and reciprocal access to markets and infrastructure. That would include access to pipelines for third parties.[19]

The idea of developing a pan-European Energy Community is also discussed. For some time, the EU had been engaged in including its neighbours and bringing them closer to the EU's internal market by widening the EU energy market. The Commission proposed to create a common regulatory space around Europe in order to develop common trade, environmental and transit rules, market harmonization and integration. This 'space' would bring both the EU and its neighbours a transparent and predictable market to stimulate growth and investment as well as security of supply.[20]

The Commission concluded that sustainability, competitiveness and security of supply should become the main objectives of the European Energy Policy. In order to meet these objectives, they made six concrete proposals:

1. The EU needs to complete the internal gas and electricity markets
2. The EU needs to ensure that its internal energy market guarantees security of supply and solidarity between member states
3. The EU needs a debate on the different energy sources
4. The EU needs to deal with climate change
5. The EU needs a strategic energy technology plan
6. The EU needs a common external energy policy

The Commission concluded that a common external energy policy can be achieved by: identifying European priorities for the construction of new infrastructure for the security of EU energy supplies, developing a pan- European Energy Community, creating a new energy partnership with Russia, creating a new Community mechanism to enable rapid and coordinated reaction to emergency external energy supply situation impacting EU supplies, deepening energy relations with major producers and consumers and creating an international agreement on energy efficiency.[21]

In January 2007, the Commission presented its first common European Energy Policy. The document is an elaboration of the Strategy the Commission presented one year earlier, there is little new in it. The pillars of this policy are sustainability, security of supply and competitiveness. In 2007, the EU was for 50% depended on energy import and they expected

[19] "Green Paper: A European strategy for sustainable, competitive and secure energy," 8 March 2006, accessed 1 December 2019, Commission of the European Communities, 15.
[20] Idem, 16.
[21] Idem, 17-20.

an increase to 65% in 2030. In the introduction of the policy, the Commission mention again that dependence carries political and economic risks. Furthermore, they state that several member states are largely or completely dependent on one single gas supplier and that in an event of an energy crisis the mechanisms to ensure solidarity between member states are not yet in place. The proposed action plan of the Commission focused on the creation of an internal market, solidarity between member states and of course on the security of supply. They were convinced that an internal energy market would increase the interdependence of member states in their energy supply. The Commission stresses that the EU has effective energy relationship with gas suppliers such as the European Economic Area (EEA) and Norway, as well as with Russia and Algeria. They mention explicitly that they are confident that these relationships will strengthen in the future. However, that did not take away their desire to diversity regarding the source, supplier, transport route and transport method. They made three proposals to promote energy security. At first, they wanted to take measurements to assist member states that are (mostly) dependent on one supplier to diversify their sources. Secondly, they wanted to develop projects to get gas from new regions, set up new gas hubs in Central Europe and Baltic countries and facilitate with the construction of new liquid natural gas terminals. Finally, they wanted to make new investments in storage and pipeline capacity of strategic gas stocks.[22]

The years prior to the creation of the document, the drastically EU enlarged. In 2004, the EU expanded from 15 member states to 25. Most of these new member states (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia) were former Comecon states. When Bulgaria and Romania also entered the EU in 2007, the European family was almost complete. 5 years later, Croatia would be the final country to enter the EU up to date. Europe's Eastern enlargements of 2004-2007 caused a much greater variety of energy systems, naturally making the matter more complex.

Until 2009, a European Energy Policy and related issues were still under the exclusive authority of individual member states as the matter was solely addressed in these EU documents as the level of secondary legislation. The new Treaty on the Functioning of the EU (TFEU), which is part of the Lisbon Treaty (1 December 2009) was probably the most important change in the process of shaping a common policy. A framework for energy cooperation and a new legal foundation for adopting measures through legislative acts was created in the third part of the TFEU, which formally constitutes the EU energy policy of primary legislation. The Lisbon Treaty was the first official contract to refer explicitly to energy policy together with solidarity

[22] "An Energy Policy for Europe," 10 January 2007, accessed 4 December 2019, Commission of the European Communities, 3-19.

with specific goals such as security, functioning of the internal energy market, energy efficiency and interconnectedness of energy networks. What is important to point out, is that since the Lisbon Treaty, energy related issues are now included among the shared powers of the EU and its member states. In practicality this means that member states lost their exclusive control over this strategic area.[23]

Several gas disputes between Russia and transit country Ukraine resulted in temporary disruptions of gas supplies and left several EU countries with severe shortages. This had a direct impact on EU citizens, in particular Europe's new member states in Central and Eastern Europe. In 2008, the dispute started when Ukrainian gas company Naftogaz had to pay its debts for previous gas supplies in order to prevent the Russian company Gazprom from no longer delivering new supplies. After a series of failed negotiations in 2008, Russia decided to cut off gas supplies to Ukraine on the 1st of January 2009. Two weeks later, on January 18th, Ukrainian Prime Minister Yulia Tymoshenko and Russian Prime Minister Putin met to resolve the dispute.[24] A similar dispute took place back in 2006, impacting 13 European (not all were EU member states) countries. These countries saw a drop in the supply of gas between 30% (Slovakia, Slovenia) and 100% (Serbia, Croatia and Bosnia and Herzegovina).[25]

Policy makers called these disputes a 'stark wakeup call' and it became evident that the approach for the energy supply of the EU needed to be revised. Within Europe's political debate, 'energy security' began to gain more prominence. In the meantime, the EU tried to harmonize and integrate its energy governance. The difficulty for the EU was that it became evident that 'energy security' was defined, perceived and act upon very differently amongst its member states, which created a very splintered policy landscape. The wake of the Crimean annexation in March 2014 turned out to be a great push for the EU into dealing with this problem.[26]

Following the conflict between the Russian Federation and Ukraine, energy security became the number one topic in the EU. The EU's energy security had been endangered as consequence of the EU's political, economic and individual sanctions against Russia, even though the sanctions were not directly targeted to the Russian energy industry. The EU feared (and is still afraid of) a partial reduction or maybe even complete cut-off of the energy material

[23] Tichy, Lukas, *EU-Russia Energy Relations: A Discursive Approach* (Cham: Springer Nature Switzerland: 2019), 26-27.
[24] Turksen, Umut, *EU Energy Relations with Russia* (London: Routledge, 2018), 2.
[25] Editors, "Ukraine 'stealing Europe's gas'," BBC News, 2 January 2006, accessed 7 December 2019, http://news.bbc.co.uk/2/hi/europe/4574630.stm
[26] Szulecki, Kacper, *Energy Security in Europe: Divergent Perceptions and Policy Challenges* (Cham: Palgrave Macmillan, 2018), 2.

supply.[27] In response to those concerns, the European Commission released its Energy Security Strategy in May 2014. The strategy "aims to ensure a stable and abundant supply of energy for European citizens and the economy."[28]

The opening statement from the 'European Energy Security Strategy' by the European Commission captures the importance of energy in the current European society: "The European Union's prosperity and security hinges on a stable and abundant supply of energy. […] For most citizens, energy is available "on tap", it is ubiquitous and un-intrusive. This has a major influence on the factors that affect national decisions on energy policy, with security of supply not being on par with other considerations."[29]

This strategy was published in May 2014, just two months after the Russian annexation of the Crimean Peninsula. It is written in an 'unprecedentedly geopolitical tone' and was one of the first signs of the EU's changing climate in its energy policy.[30] In this report, the Commission mostly stresses the need for cooperation and solidarity amongst EU member states. Furthermore, they note that energy security issues are too often addressed only at a national level without taking fully into account the interdependence of member states. A more collective approach through a functioning internal market and greater cooperation at regional and European levels are presented as the key to improved energy security.[31]

This need for a collective approach became the core of the energy policy of the former Polish Prime Minister Donald Tusk (who became President of the European Council at the end of 2014) when he proposed an Energy Union. The idea of this Union was later taken up and re-shaped by the new European Commission under the watchful eye of Jean-Claude Juncker. In February 2015, the Strategy for the Energy Union was adopted. This was a major step towards a unified energy policy. The strategy had the same pillars of energy security, sustainability and competitiveness. Energy resilience was the central point of the strategy. Key to enhance energy resilience, was according to the Commission to reduce the overall dependence of EU economies on imported hydrocarbons.[32]

---

[27] Tichy, Lukas, *EU-Russia Energy Relations: A Discursive Approach* (Cham: Springer Nature Switzerland, 2019), 2.
[28] "*European security strategy*," European Commission, accessed 30 November 2019, https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/energy-security-strategy#content-heading-2
[29] "European Energy Security Strategy," 28 May 2014, accessed 12 August 2019, European Commission, 2.
[30] Szulecki, Kacper, *Energy Security in Europe: Divergent Perceptions and Policy Challenges* (Cham: Palgrave Macmillan, 2018), 2.
[31] "European Energy Security Strategy," 28 May 2014, accessed 12 August 2019, European Commission, 2-20.
[32] "*Speech by Commissioner Miguel Arias Canete a the 4th EU Energy Summit: International geopolitical uncertainties: brakes or accelerators for the EU energy transition?"* European Commission, accessed 28 May 2020, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_18_3242

However, the Commission wanted to further strengthen the EU influence in the external dimension of energy policy and therefore they assumed the mandate to oversee all future negotiations over new gas pipeline projects and also assumed a much greater engagement in the creation of intergovernmental treaties. At the same time, the EU recognized the importance of the external dimension of the Energy Union and recommended a greater involvement in the area of energy diplomacy. Half a year later, July 2015, the EU Energy Diplomacy Action Plan was adopted by the Foreign Affairs Council.[33]

Although the Commission is trying hard to pursue a common energy policy, all 27 member states still have their own energy policies. The reason that they have their own policies, existing parallel with the slowly forming energy policy of the EU is the result of political and structural obstacles within the EU for having one common energy policy. To grasp the difficulty of creating a common energy policy, it is important to understand that member states are not really eager to give up their energy related sovereignty. Lukas Tichy, author of the book 'EU-Russia Energy Relations', explains that there are at least four reasons why member states protect their sovereignty so vividly. The first reason he gives is that countries are not willing to give up national security and energy policy is always being considered as a component of national security. The second reason is that a disunited attitude amongst member states plays a significant role in the negotiations with major energy suppliers. This attitude stems from the great variety of aims and approaches regarding economy, energy and foreign and security policy amongst the member states. As third reason, Tichy explains that key factors preventing a unified policy are the different structures of national energy sectors and the related requirements for energy resource composition. The final reason is that member states have expressed their concerns that if overly ambitious targets were set, their economies would lose competitiveness.[34]

Traditionally, energy policy is in many countries an element of economic their policy. For example, the Foreign Office in Germany is not involved in energy policy decision making. However, in France energy policy is differently organized. Current President Emmanuel Macron (and his predecessors) have a major say in any energy related policies. The EU is divided on the approach of energy policies and maybe they are simply not ready for a common

[33] Tichy, Lukas, *EU-Russia Energy Relations: A Discursive Approach* (Cham: Springer Nature Switzerland: 2019), 27.
[34] Idem, 28.

energy policy. Therefore, perhaps it is better to conclude that the EU is still in the process of formulating a coherent energy policy, rather than having a consolidated policy at the moment.[35]

The Nord Stream pipeline and German- Polish relations

The difficulty with the formation of a common European energy policy can be illustrated by the issue of the Nord Stream pipeline. The project created friction between several member states and has ignited heated debates within the EU. As soon as the project started, it attracted criticism. A 2016 policy paper from the Environmental Studies and Policy Research Institute ESPRi (a think-tank accredited by the Polish Ministry of Science and Higher dedication) shows the hamper of the development of a common energy policy by discrepancies between European member states, in particular Germany and Poland, about the articulation and understanding of energy security. Both states are prominent in Europe's energy debate. They often advocate for diverging interpretations and policy solutions, even though they have to cope with similar energy security challenges. They have opposing views on many issues such as the use of nuclear power stations and renewables but in the case of gas pipelines and electricity interconnectors, actions by one country are seen as direct threat by the other. Their biggest twist point is energy dependence on Russia. The construction of the Nord Stream pipeline (in use since 2011) is without doubt the most controversial energy issue in the German-Polish relations. The Nord Stream pipeline allows direct natural gas deliveries from Russia to Germany bypassing Poland, one of the traditional transit countries. In Poland, the project is received overwhelmingly negative because it is viewed as politically motivated and a threat for the energy security in Poland. Poland's former Minister of Defense, Radoslaw Sikorski, even linked the pipeline project with the Molotov- Ribbentrop pact (the pact between Hitler and Stalin in which they agreed to invade and divide Poland in 1939). The most important threats that Poland directly linked to the pipeline were economic in nature, followed by political risks. Poland lost its income from the transit fees they charged Russia and it was argued that Russia would have the possibility to interrupt gas deliveries to Poland without harming Germany and other Western consumer countries.[36]

Germany and Austria have emerged as main advocates of the project and France and the Netherlands appear amenable to it due to involvement of domestic corporate interests. In

[35] Schaffer, Brenda, *Energy Politics* (Pennsylvania: University of Pennsylvania Press, 2011), 129.
[36] "Towards a common EU energy policy? Debates on energy security in Poland and Germany," February 2016, accessed 20 December 2019, ESPRI, 1-6.

the Bundestag, the German parliament, was only a minor discussion about Nord Stream. The main argument the supporters put forward was that the project follows the commercial logic by linking supplier and consumer with competitively priced gas. Furthermore, they advocated that it will meet the further demand that is created by the closure of nuclear power plants in Germany and the need to switch energy consumption from the more polluting coals and oil to gas.[37] German media reports however were more critical as they highlighted the environmental risks, the damage of the relationship with fellow member states and an increasing dependence on Russia.[38] This was also the most important argument of the opponents of the project. Poland, the Baltic States (the other transit countries bypassed by North Stream), Romania and Slovakia argued that Nord Stream would consolidate Gazproms position in the EU energy market and its strategic leverage of Moscow. Their stance can be explained by a number of factors, including strategic reasons such as the loss of their strategic importance, but also the intention to diversify energy imports and concerns about east-west energy trade.[39]

Struck between these opposing views, EU institutions have taken different stances towards Nord Stream. At first, the Commission opposed to the project as well and they requested a mandate from the Council of the EU (all heads of states of each EU member state) to negotiate an agreement with Russia concerning the operation of the pipeline, arguing it was necessary to define a legal framework. Their request was nothing more than a response to the pressure of opposing member states, but the Legal Service of the Council concluded that there was no legal rationale for an EU-Russia agreement concerning the project. Besides, the EU energy market had been built around the principles of liberalization and competition and any political attempts to block new projects like Nord Stream would counter this logic.[40]

So, despite fierce protests from the opponents, the construction of the 1,224 kilometer long offshore pipeline began in April 2010. The pipeline was built by Nord Stream AG, an international consortium consisting of Russian state company Gazprom, the German based Wintershall Dea, PEG Infrastruktur (now part of E.ON energy company), Dutch gas transportation company Nederlandse Gasunie and the French gas distribution company ENGIE. The first gas came through the pipeline mid-November 2011.[41]

---

[37] Marco Siddi, "Russia's evolving gas relationship with the European Union," Energy Post, 15 October 2018, accessed 28 January 2020, https://energypost.eu/russias-gas-relationship-with-europe/
[38] "Towards a common EU energy policy? Debates on energy security in Poland and Germany," February 2016, accessed 20 December 2019, ESPRI, 1-6.
[39] Marco Siddi, "Russia's evolving gas relationship with the European Union," Energy Post, 15 October 2018, accessed 28 January 2020, https://energypost.eu/russias-gas-relationship-with-europe/
[40] Idem.
[41] "*The pipeline*," Nord Stream, accessed 20 December 2019, https://www.nord-stream.com/the-project/pipeline/

Similar tensions arose again in 2016 when plans were made to expand the pipeline. Germany kept stressing that the pipeline was an economic project, and not political. Furthermore, they stated that the position of Gazprom on the European domestic market depends in the first place on the competitiveness of Russian gas deliveries in competition with other suppliers. Poland demanded that the pipeline had to be constructed on land across Polish territory but soon it was countered with the argument that the consortium of Nord Stream is free to make its own commercial decisions. Despite Polish anti-trust proceedings, construction of the Nord Steam 2 started in May 2018. The project has made it clear that in relation to Russian energy supplies, German and Polish perceptions of energy security are as contrary as ever.[42]

The legal framework for EU-Russian energy relations

To enhance certainty and uphold the interests of trade partners, all inter-state trade relations must be put on a legal footing. Since the 1990's, several multilateral and bilateral legal instruments are designed to enhance the security of energy supplies from Russia to the EU. Some of these regimes can provide a strong basis for the EU and Russia to cooperate in the energy sector. However, a comprehensive and effective legal energy framework between Russia and the EU is currently nearly non-existent. It is difficult for the 27 EU member states to reach agreement and find compromises, specifically between the 'old' Western states and the 'new' Central and Eastern states of which there is a considerable diverge of interests.[43]

Partnership and Cooperation Agreement

The first legal document for relations between the EU and Russia is the Partnership and Cooperation Agreement (PCA), singed in 1994. The agreement provides a bilateral legal basis for trade and it regulates the cultural, economic and political relations between Russia and the EU. When the agreement was signed, trade was largely concentrated in mineral and energy sectors. The primary objective of the agreement was to create an overall framework for political dialogue with the aim to have free trade between Russia and the EU and to gradually integrate Russia to market economy. Explicitly dedicated to energy is Article 65. The Article refers to a number of energy related issues, stating that the quality and security of energy supply should

[42] "Towards a common EU energy policy? Debates on energy security in Poland and Germany," February 2016, accessed 20 December 2019, ESPRI, 1-6.
[43] Turksen, Umut, *EU energy relations with Russia: solidarity and the rule of law* (London: Routledge, 2018), 64.

be improved by cooperation. On the 1st of December 1997, the PCA came into force for a period of 10 years. To avoid a legal vacuum and uncertainty, the agreement was automatically prolonged with mutual agreement. Currently, negotiations for a new PCA are ongoing but it is unexpected that there these initiatives will bring any tangible results soon.[44]

Energy Charter Treaty

When the Cold War ended, Europe was divided between the West which was rich in money but energy poor and the East which was poor in money but energy rich. International law was not clear about the nature of rights and obligations regarding the transit of energy materials from Eastern to Western Europe. In 1991, the European Energy Charter was signed out of the need of combining the Western concerns and interests regarding the security of energy supplies with the Eastern energy assets. Increasing interdependence between West and East and providing more diverse energy routes and sources were the main aims of the Charter. The Charter was not legally binding, but it provided a political direction for the Energy Charter Treaty (ECT) of 1994. This binding multilateral legal instrument came into force 1998 and it is the only one in its kind to deal cooperation in the energy sector that includes both private parties and governments. The basic elements of the ECT are: freedom of energy transit, trade in energy, energy products and related equipment based on WTO rules, international dispute settlement, improved legal transparency and investment protection.[45]

EU- Russia Energy Dialogue

The formal Energy Dialogue was established on 30 October 2000 during the sixth EU- Russia Summit. The European Commission and the Russian Ministry of Energy established the EU-Russia energy partnership because both considered the energy sector as too important for one section of the PCA to deal with. In short, the Dialogue "provides the overall structure for energy cooperation between the EU and Russia going forward."[46] De dialogue aims on integration of EU and Russian energy markets, reforming the Russian energy industry and to make sure that the existing rules of the European energy market could be incorporated in Russia. Simply put, like the other treaties and charters, this dialogue wants to improve European energy security by

[44] Turksen, Umut, *EU energy relations with Russia: solidarity and the rule of law* (London: Routledge, 2018), 43-47.
[45] Idem, 47-50.
[46] "*EU-Russia Energy Dialogue*," European Commission, accessed 6 December 2019, https://ec.europa.eu/energy/en/topics/international-cooperation/EU-cooperation-other-countries/russia/eu-russia-energy-dialogue

creating a closer relationship between Russia and the EU. They meet twice a year and are supported by thematic groups. These groups bring together Russian and EU experts and was established to exchange views on EU's and Russia's strategies, policies and forecasts in energy. By 2030, they want to bring coherence to their respective energy forecasts and scenarios. In addition, round tables are occasionally organized to discuss various issues. The Dialogue annually publishes their practical results as 'Progress Reports.' Some examples of tangible achievements that strengthen the energy security supply from Russia are the creation of the EU-Russia Technology Centre and the Permanent Partnership Council consisting of the Russian Minister Responsible for Energy, the EU Energy Commissioner and the Minister Responsible for Energy (from both the current EU Presidency as the next Presidency). In addition, to deal with and solve trade problems before they turn into a conflict a Memorandum on Early Warning Mechanisms was signed. The importance of the dialogue however should not be overstated as it effectiveness is limited due to its non-binding nature. Nevertheless, the ongoing dialogue can prepare the basis for discussions on the introduction of a legally binding measures for EU-Russia energy relations in the future.[47]

There are more regimes that foster solidarity and that (try to) contribute to the security of the EU's energy supply, for example the Energy Community (Encom). Encom is established to extend the EU's energy community law to the South-East Europe, based on a legally binding energy trade framework. The establishment itself was already an achievement, because it was just 10 years after the Balkan conflict. Because Russia is not part of Encom, they cannot offer a platform for the energy trade with Russia or solve disputes arising therein, it is not worth to discuss the matter further.[48]

World Trade Organization

The final regime worth mentioning, is not a specific EU-Russian agreement but it is the intergovernmental World Trade Organization (WTO). WTO is the world largest economic organization and regulates international trade between nations. The WTO enjoys a high degree of legitimacy that can be attributed to the thickening of legality and effective dispute settlement. Although energy trade is not addressed as distinctive sector, it is argued that trade in energy goods and services are forms of trade and therefore the fundamental principles of the WTO are

[47] Turksen, Umut, *EU energy relations with Russia: solidarity and the rule of law* (London: Routledge, 2018), 56-58.
[48] Idem, 59.

applicable. WTO is the only international trade organization that has an adjudication regime with an automatic and compulsory jurisdiction, even though the WTO rules on energy are only a fraction of international legal instruments pertaining to energy. Nevertheless, it should be noted that in the recent years, the topic of energy trade has dominated the WTO negotiation agenda. The explanation therefore can be found in the increase in the number of energy exporting countries which are part of WTO. Multilateral trade negotiations have inevitably included energy policies because of its direct impact on development, environment and climate change. In August 2012, Russia became the 156th member of WTO after nearly two decades of accession negotiations. Russia was able to become a WTO member without the so called 'WTO-plus commitments' meaning that Gazprom, Russia's state-owned energy exporter, has no trade barriers and therefore can apply export taxes when exporting its energy products.

What becomes clear is that regarding energy trade, any future initiatives within the WTO legal framework should recognize both the structural factors and the composition that are unique to the energy sector. Umut Turksen, author of the book EU-Russian energy relations, mentions that because of the uniqueness of the energy sector, some commentators opine that the WTO should allow a flexible application of its rules to the energy sector. The reason they would be in favor of this special treatment is that they believe that "energy resources typically belong to a State and that many energy exporting countries have structured their energy sectors around state owned enterprises."[49] Turksen acknowledges that this approach could be a "pragmatic response" for the current situation but he considers it unlikely that it would provide an effective mechanism for liberalization and adjunction of energy trade.[50]

Dependence

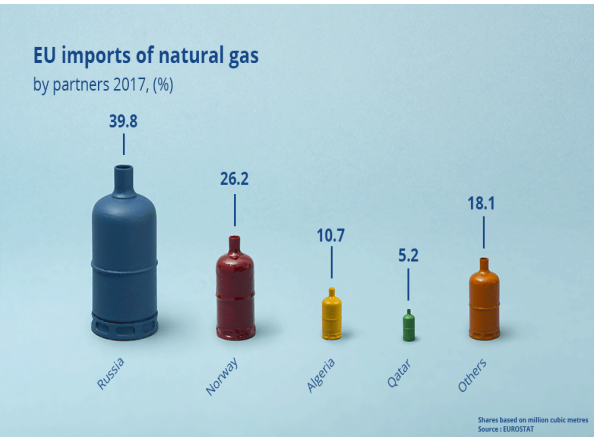
The origin of European energy

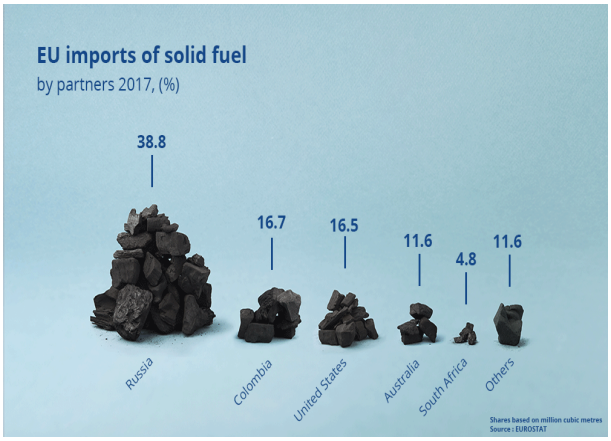
The range of available energy sources in the EU, the so called "energy mix", is roughly composed of crude oil, natural gas, solid fossil fuels[51], renewable energy and nuclear energy. Oil, gas and solid fuels account for about 72% of the total primary energy consumption. Eurostat, the statistical office of the EU, shows that 45% of all energy is produced within the

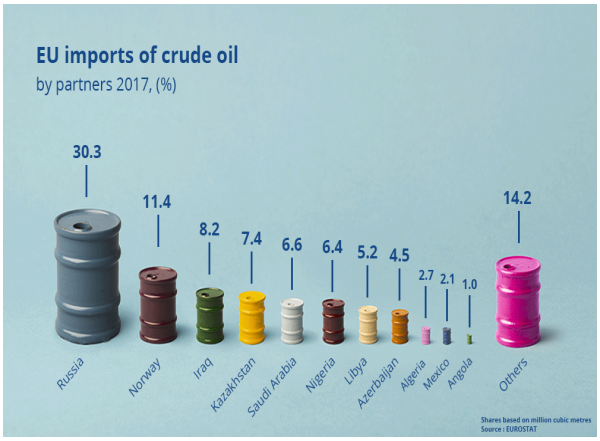
[49] Turksen, Umut, *EU energy relations with Russia: solidarity and the rule of law* (London: Routledge, 2018), 64.
[50] Idem.
[51] Solid fossil fuels cover: hard coal, brown coal and coal products.

EU itself, while 55% of Europe's energy is imported. The most recent data available in Eurostat is from 2017 and therefore, all data used in this chapter is from 2017.[52]

Nuclear energy and renewable energy are mostly produced by the EU itself, while crude oil, natural gas and solid fuels are mostly imported. In all three sectors, Russia is the main supplier to the EU. Here is an overview of Europe's biggest energy suppliers divided by natural gas, solid fuel and crude oil.[53]







These numbers give a general overview of the European energy import, however there are clear dependence patterns among different EU member states. Therefore, the three tables on the next pages show an overview EU energy imports divided per each member state. The table features their three main suppliers and is arranged according to the extent to which each member state is dependent on energy from Russia. For clarity, Russia is marked in blue.

[52] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 27 January 2019, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html
[53] Idem.

Figure 1: CRUDE OIL import per EU member state[54]

EU Member State	Nr. 1	%	Nr . 2	%	Nr. 3	%
Slovakia	Russia	74.0	Czech Republic	8.1	Austria	7.3
Finland	Russia	71.9	Sweden	11.3	Norway	8.0
Poland	Russia	68.5	Germany	5.3	Saudi Arabia	5.2
Lithuania	Russia	61.8	Kazakhstan	21.3	Saudi Arabia	5.3
Bulgaria	Russia	50.2	Iraq	16.2	Kazakhstan	9.5
Hungary	Russia	42.7	Iraq	19.9	Slovakia	11.8
Romania	Russia	40.9	Kazakhstan	28.2	Azeraijan	7.5
Czech Republic	Russia	35.2	Azerbaijan	20.8	Germany	12.1
Belgium	Russia	33.3	Netherlands	19.6	Saudi Arabia	13.0
Germany	Russia	31.4	Netherlands	14.8	Norway	8.1
Sweden	Russia	31.2	Norway	23.6	Denmark	13.9
Netherlands	Russia	30.1	Belgium	11.1	UK	9.8
Portugal	Russia	22.1	Azerbaijan	10.3	Spain	10.0
France	Russia	14.6	Saudi Arabia	9.9	Kazakhstan	9.2
Estonia	Lithuania	47.7	Russia	29.8	Finland	13.6
Latvia	Lithuania	42.6	Russia	24.1	Finland	16.0
Denmark	Norway	41.3	Russia	21.8	Sweden	8.9
Greece	Iraq	30.3	Russia	19.6	Iran	13.0
UK	Norway	28.9	Russia	11.5	Netherlands	9.0
Italy	Azerbaijan	14.6	Iran	11.2	Russia	11.1
Luxembourg	Belgium	65.5	Germany	21.0	France	9.4
Ireland	UK	49.0	Norway	21.4	US	5.5
Slovenia	Italy	42.7	Austria	11.0	US	7.8
Cyprus	Greece	35.1	Israel	26.4	France	17.9
Austria	Germany	30.3	Kazakhstan	17.0	Iraq	7.7
Malta	Cameroon	23.3	UK	23.3	Italy	19.4
Croatia	Italy	17.7	Iraq	13.9	Azarbaijan	12.1
Spain	Mexico	10.9	Nigeria	10.6	Saudi Arabia	9.5

[54] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 27 January 2019, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html

Figure 2: NATURAL GAS import per EU member state[55]

EU Member State	Nr. 1	%	Nr. 2	%	Nr. 3	%
Finland	Russia	100.0	n/a		n/a	
Estonia	Russia	100.0	n/a		n/a	
Latvia	Russia	100.0	n/a		n/a	
Bulgaria	Russia	100.0	n/a		n/a	
Czech Republic	Russia	99.2	n/a		n/a	
Romania	Russia	98.9	Bulgaria	1.1	n/a	
Hungary	Russia	95.0	n/a		n/a	
Slovakia	Russia	84.6	n/a		n/a	
Germany	Russia	52.3	Norway	9.2	n/a	
Poland	Russia	65.6	Germany	22.7	Qatar	9.8
Greece	Russia	58.2	Algeria	25.1	Turkey	12.3
Lithuania	Russia	53.7	Norway	35.3	US	7.2
Italy	Russia	47.5	Algeria	28.0	Qatar	9.7
Luxumbourg	Norway	63.9	Russia	25.3	Algeria	0.1
Slovenia	Austria	75.0	Russia	23.0	n/a	
France	Norway	41.8	Russia	18.7	Netherlands	11.3
Netherlands	Norway	48.6	Russia	17.3	UK	15.3
Ireland	UK	100.0	n/a		n/a	
Denmark	Norway	80.4	Germany	19.6	n/a	
UK	Norway	76.1	Qatar	12.2	Belgium	5.6
Sweden	Denmark	70.6	Norway	18.4	Netherlands	5.5
Malta	Trinidad	65.3	Equitorial Guinea	20.9	US	8.0
Croatia	Hungary	52.8	Austria	34.6	Slovenia	12.5
Spain	Algeria	48.3	Nigeria	12.7	Peru	10.1
Belgium	Netherlands	43.3	Norway	28.7	UK	14.8
Portugal	Nigeria	33.9	Algeria	33.8	Qatar	9.3
Austria	No data		No data		No data	
Cyprus	No data		No data		No data	

[55] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 27 January 2019, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html

Figure 3: SOLID FUELS import per EU member state[56]

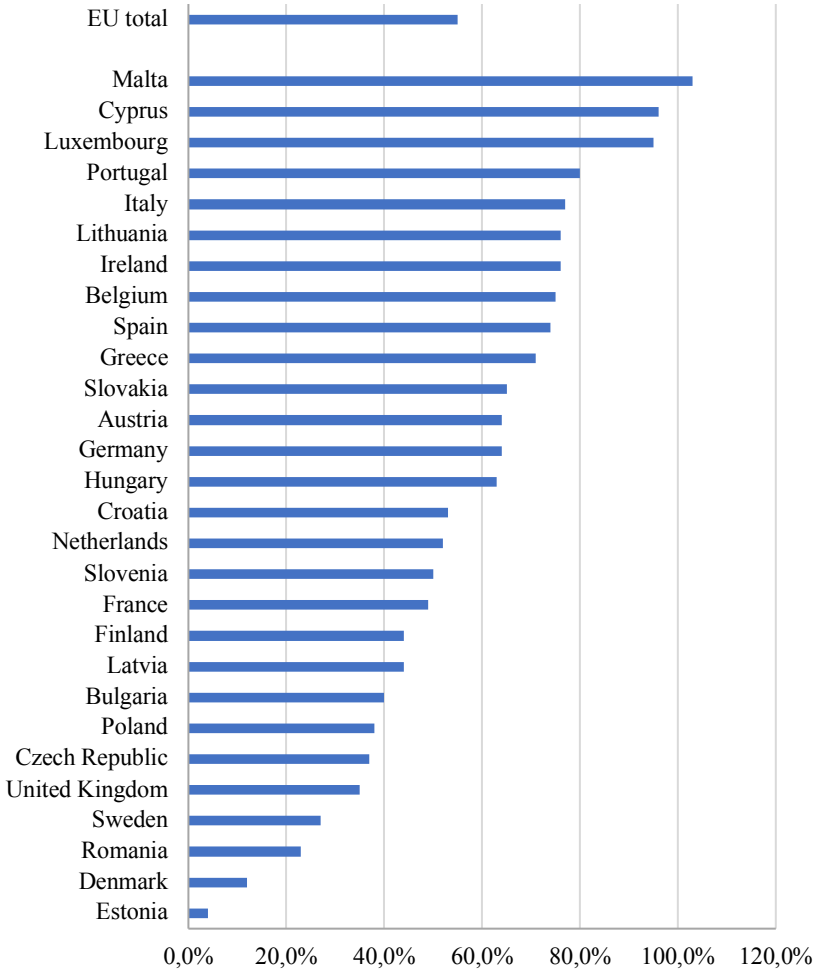
EU Member State	Nr. 1	%	Nr. 2	%	Nr. 3	%
Estonia	Russia	100.0	n/a		n/a	
Latvia	Russia	98.2	Lithuania	1.4	Estonia	0.3
Lithuania	Russia	94.4	Ukraine	3.4	Denmark	1.8
Greece	Russia	90.0	US	8.8	Mozambique	1.2
Bulgaria	Russia	81.7	Ukraine	10.7	South Africa	6.9
Croatia	Russia	77.3	Colombia	10.7	Czech Republic	5.6
Cyprus	Russia	66.7	Greece	33.3	n/a	
Poland	Russia	64.7	Australia	12.9	US	5.9
Finland	Russia	63.4	Canada	15.8	US	11.3
Denmakr	Russia	57.6	South Africa	19.8	Colombia	15.6
Romania	Russia	44.1	Poland	42.8	South Africa	5.0
UK	Russia	42.1	US	24.8	Australia	9.0
Germany	Russia	36.1	US	17.1	Colombia	11.7
Italy	Russia	34.6	Colombia	21.0	US	18.3
Netherlands	Russia	33.5	US	19.2	Colombia	14.7
Slovakia	Russia	27.2	Czech Republic	24.9	Poland	23.0
France	Russia	26.0	Australia	25.7	US	15.9
Spain	Russia	26.0	Colombia	23.6	Indonesia	22.0
Belgium	Australia	29.2	Russia	27.7	US	16.2
Luxumbourg	South Africa	80.6	Russia	6.1	n/a	
Sweden	Australia	35.7	US	18.4	Russia	17.8
Portugal	Colombia	78.8	US	12.9	Russia	5.2
Slovenia	Indonesia	89.7	Romania	4.8	Czech Republic	2.4
Ireland	Colombia	87.1	UK	3.1	Poland	1.2
Czech Republic	Poland	80.9	Germany	5.4	Canada	4.2
Austria	Poland	48.9	Czech Republic	13.6	US	11.4
Hungary	US	38.6	Czech Republic	23.2	Australia	12.1
Malta	No data					

[56] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 27 January 2019, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html

Understanding dependency

What stands out in these figures is that the number of suppliers, and the extent of dependence of each member state, varies heavenly between the three different energy types. To determine to what extent the EU is dependent on energy import, Eurostat has developed an energy dependency rate. The rate shows to which extent the economies of all EU member states rely upon energy imports to meet their needs. The rate is measured by the share of net imports (imports minus exports) in gross inland energy consumption. The total energy dependency rate of the EU in 2017 was 55%, so slightly more than half of the energy needs were imported. Here follows an overview of the energy dependency rate of each member state.[57]

Figure 4: 2017 Energy dependency rate %



[57] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 27 January 2019, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html

Again, there are notable differences amongst member states. It is not surprisingly that small countries like Malta, Cyprus and Luxembourg are very dependent on external energy suppliers. On the other side of the spectrum, Romania, Denmark and Estonia are hardly dependent on external suppliers. The real question is not how dependent are member states, but whether or not dependency is a problem. In order to answer that question, it is useful to combine the total dependency rate of each member state with the extent to which they depend on their main suppliers. When a high proportion of energy imports are concentrated among relatively few external partners, the stability of the EU's energy supply could possibly be threatened. In short: energy security depends not only on a low dependency rate, but also on the number of external suppliers. Concentrating on external suppliers, few major suppliers continue to dominate the import picture. The main challenge for the EU seems to concern the gas sector, since the oil and solid fuel markets have a broader variety of suppliers and multiple options for transportation. As seen in the tables about energy imports, the current risk of security of energy supply is the highest in the Visegrad countries (Poland, Slovakia, Hungary and the Czech Republic) and in the Baltic States (Estonia, Latvia and Lithuania). To prevent the EU from becoming too dependent on a small pool of suppliers, European energy policy is focused on diversifying sources and suppliers of energy. A clear example of the EUs diversifying strategies are the measurements to diversify gas supply. This includes constructing new routes in order to decrease the dependence of EU countries on single suppliers of natural gas and other energy resources and to ensure the EU internal market is less sensitive to shocks in gas supply. A key project in diversification efforts of the EU is the Southern Gas Corridor. Already working on Northern and Eastern Gas Corridors, the remaining priority for the EU is to bring gas from the Caspian region directly to the EU.[58] Additionally, the EU is strengthening the reverse flow capacities (making gas pipelines bidirectional) as well as expanding the LNG import capacity to contribute to security of energy supply so that member states are able to respond more efficiently to temporary shortages or surpluses on the regional gas markets.[59]

These concerns and measurements are not new, energy trade relations of the EU have always been mobile as they respond to developments in geopolitics, international energy markets and the international economy in general. A number of events that determined EU energy relations are conflicts in the Middle East, the oil crises during the 1970's and the earlier

[58] "*Speech by Commissioner Miguel Arias Canete at the 4th EU Energy Summit: International geopolitical uncertainties: brakes or accelerators for the EU energy transition?"* European Commission, accessed 28 May 2020, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_18_3242

[59] "*Diversification of gas supply sources and routes,"* European Commission, accessed 28 January 2020, https://ec.europa.eu/energy/en/topics/energy-security/diversification-of-gas-supply-sources-and-routes

discussed gas disputes between Russia and Ukraine. A flurry of new initiatives concerning energy relations was the direct consequence of the 1973 oil crisis. Under the aegis of the Organization Economic and Cooperation Development (OECD), the International Energy Agency (IEA) was founded with substantial powers in can of an oil market disruption. One month later, the EU (then nine member states) agreed to a common energy policy. It took a very long time before the policy was actually developed, but the origin of today's energy policy lies in the desire to increase the EU's energy security and solve energy related problems together with all member states instead of individually.[60]

Soviet legacy and Russia as main energy supplier of the EU

The successive enlargements of the EU had a major influence on the development of external energy relations. The most significant influence for the current EU energy relations was the enlargement of 2004 when the Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovenia, Slovenia and Hungary became part of the EU. The energy infrastructure of these new member states had been part of the old Soviet infrastructure and their industrial endowment reflected the policy decisions that had been taken during Soviet times. These Soviet legacies have resulted in the fact that most of these new member states are nowadays still disproportionately dependent on Russia as energy supplier. They lack the infrastructure to import gas from other suppliers and therefore have no alternatives to Russian gas, that is mainly used for heating their houses. This higher degree of dependency has led to contrasting attitudes where Western European countries deal with Russia's energy in a pragmatic way while Eastern European countries lobby at EU level to break away from Russia in an attempt to reduce their overreliance on Russian energy. "The Eastern vulnerability to disruptions in the flow of Russian gas is compounded by their mistrust of Russia as a geopolitical actor, which is grounded in a long history of Tsarist and Soviet domination."[61] Due to long-standing cooperation, several Western European states like Italy, Denmark, Germany and the Netherland have a more diversified number of suppliers and are better connected to the global gas market. Therefore, they have more trust in Russia as energy trade partner. The external energy policy posture of the EU is heavenly influenced by the import dependence of these Eastern member states on Russian oil

[60] Franza, Luca, Linde, Coby van der and Stapersma, Pier, "The internal and external dynamics of EU energy relations," *International Spectator* Vol. 72 No. 2 (2018): 2-7.
[61] Siddi, Marco, "The Role of Power in EU-Russia Energy Relations: The Interplay between Markets and Geopolitics," *Europe-Asia Studies* Vol. 70 (2018): 1552-1571.

and gas. Particularly the complicated relationship between Russia and Ukraine has resulted in highly politicised gas relations.[62]

Increase or decrease?

To get a complete overview of the European dependence on Russian energy, it is important to focus on the longer-term developments in addition to the current state of affairs as was portraited in the previous chapter. How has the energy relationship between the EU and Russia developed during the past two decennia? Has the EU become more dependent on Russia or has dependence on Russian energy decreased over the recent years? In order to determine this, the dependence on Russian energy per sector since 2005 is compared in this chapter. This data provides a strong picture of the long-term trend of European energy dependence. A conscious decision has been made to measure the long-term dependence since 2005 since in 2004 European energy landscape changed after ten new member states joined the EU. The measurement points have been every other year starting in 2005. The complete overview is enclosed in the appendix, but this chapter will review and explain the highlights per sector.

Oil

The five EU member states that are most dependent on Russia for their oil import were in 2017: Finland (importing 79.9% of their oil from Russia), Slovakia (74%), Poland (68.5%), Lithuania (61.8%) and Bulgaria (50.2%). In 2005, the numbers were slightly different. Back then, the five most dependent were Lithuania (94.4%), Slovakia (78.9%), Hungary (78.9%), Finland (72.2%) and Bulgaria (69.5%). It is obvious that during these 12 years, the oil import of these five member states from Russia has decreased. However, even though these states are highly dependent, their numbers do not say much about the total European dependence on oil import from Russia. Finland, Slovakia, Poland, Lithuania and Bulgaria together make up for 10.4% of the total oil import.

To draw conclusions about the overall EU dependence on Russian oil import, it is more valuable to look at the five member states that import the most oil. In 2017 that were: France (importing 14.6% of their oil from Russia), Germany (31.4%), Italy (11.1%), the Netherlands

[62] Franza, Luca, Linde, Coby van der and Stapersma, Pier, "The internal and external dynamics of EU energy relations," *International Spectator* Vol. 72 No. 2 (2018): 2-7.

(30.2%) and Spain (5.7%). Together, their oil import makes up 57% of the total EU import. The next figure shows the five main oil importers and the percentage of their oil they import from Russia. Although there have been some shifts at individual country level, it is clearly visible that the total percentage of imported oil has only slightly increased. Between 2005 and 2017, the overall EU dependence on Russian oil increased by the small number of 1.2% while the overall absolute oil import in barrels decreased.

Figure 5.1: European oil import from Russia in percentages 2005-2017[63]

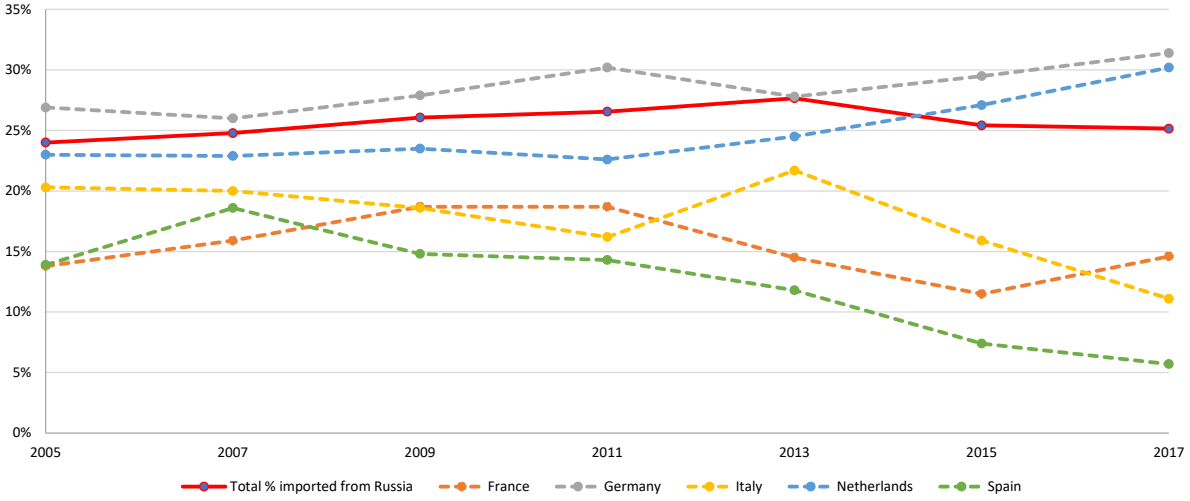
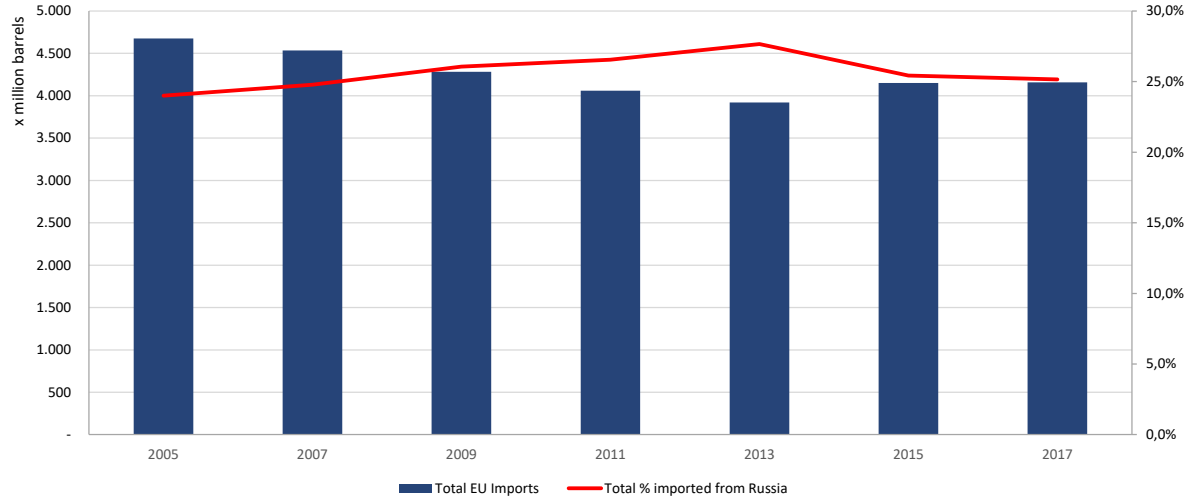


Figure 5.2: European oil import in absolute numbers and percentage of oil import from Russia 2005-2017[64]



[63] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 1 March 2020, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html

[64] *"Imports-oil-monthly data,"* Eurostat, accessed 4 March 2020 https://ec.europa.eu/eurostat/web/products-datasets/product?code=nrg_123m

Gas

During 2005, there were eight EU member states which imported 100% of their natural gas from Russia. These member states were Bulgaria, Croatia, Estonia, Finland, Latvia, Lithuania, Romania and Slovakia. Other former Comecon states such as Czech Republic (importing 76.1% of their gas from Russia), Hungary (73.4%), Poland (66%), and Slovenia (59.8%) all have a high percentage of gas import from Russia in common. In 2017, still five of these member states (Bulgaria, Estonia, Finland, Latvia and Slovakia) were importing 100% of their gas from Russia. Romania found a new supplier in Bulgaria but nonetheless imported 98.9% from Russia, while Lithuania managed to diversify its suppliers and reduced Russian import to 53.7%. Oher suppliers of Lithuania were Norway, the United States and Nigeria. The most spectacular change comes from Croatia which completely stopped importing gas from Russia. The high degree of dependence on Russian gas of former Comecon states is understandable as many of them still use the old Soviet pipeline networks. In addition, it is more difficult to find new gas suppliers as the costs to build new pipeline networks are extremely high. Together, these eight member states import 3.8% of the total EU gas import during 2017.

The five biggest gas importers of the EU are France (import 18.7% of their gas from Russia), Germany (52.3%), Italy (47.5%), the Netherlands (17.3%) and the United Kingdom (0.0%). The imported together a significant 70.9% of the total EU gas import during 2017. Like the oil import, the total gas import from Russia between 2005 and 2017 went up with 1.2%. What is interesting, is that the course of the gas import is different from the course of the oil import. On the oil figure, it is clearly visible that after years of a slow increase, there was a dip between 2013 and 2015. However, the overall oil import has been stable over the entire period while the gas import decreased until 2009 and since then has gone up back to its level of 2005. The overall total gas import has increased over the entire period.

Figure 6.1: European gas import from Russia in percentages 2005-2017[65]

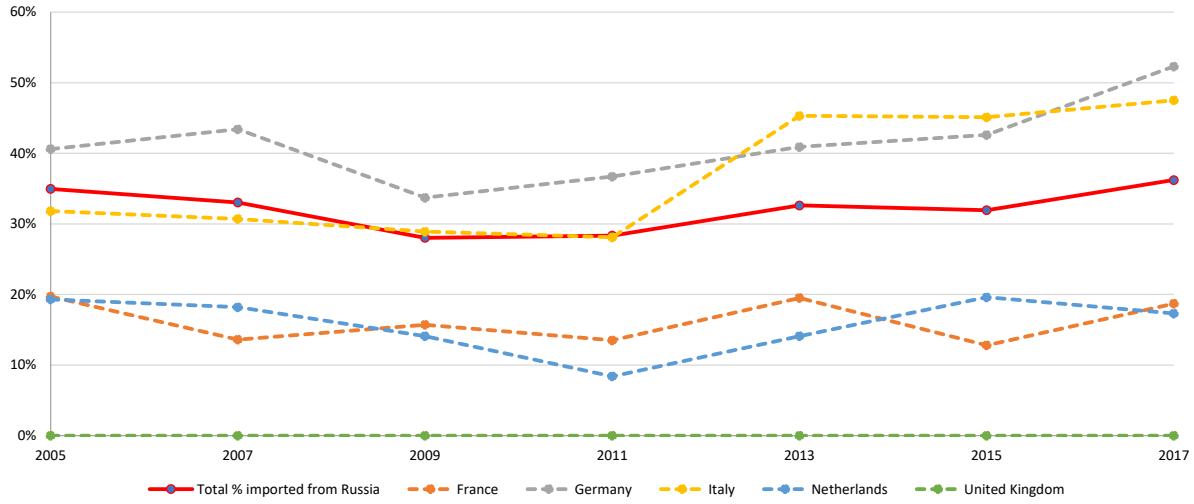
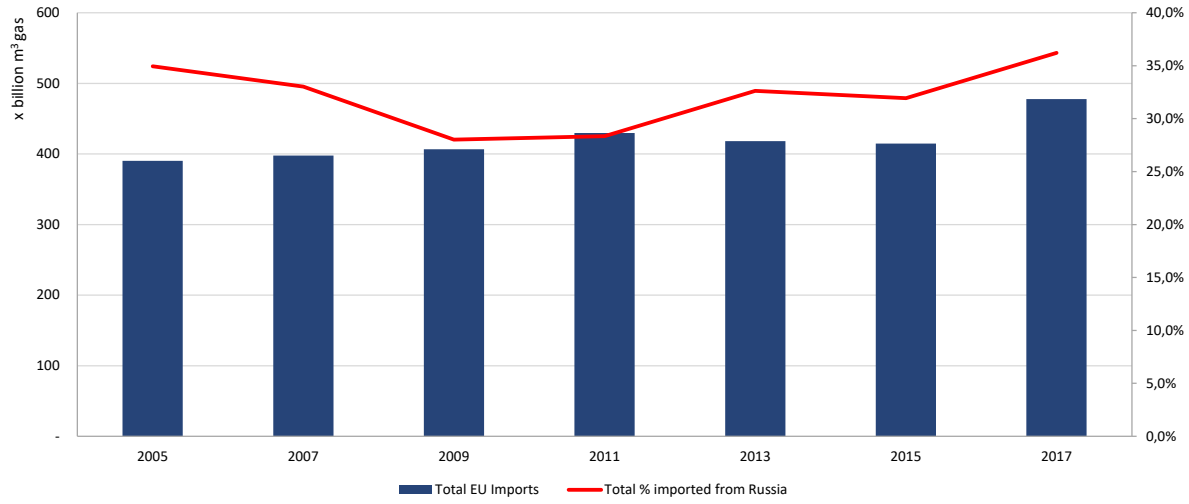


Figure 6.2: European gas import in absolute numbers and percentage of gas import from Russia 2005-2017[66]



Solid fuels

Of all energy imports, the percentage of solid fuel import from Russia increased the most with a total of 13.1%. The five member states that import most solid fuel are France (8.4% from Russia), Germany (28.7%), Italy (8.6%), the Netherlands (8.2%) and Spain (10.5%), importing

[65] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 1 March 2020, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html
[66] "*Imports-gas-monthly data*", Eurostat, accessed 4 March 2020, https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrg_124m&lang=en

together 64% of the total solid fuel import. However, although the percentage of dependence has increased, the absolute import of solid fuels has decreased. This can be explained through the energy transition, the current trend of breaking away from polluting forms of energy. In the search for cleaner alternatives, energy that originates from wind or water gains popularity over traditional sources of energy like oil, and in particular, solid fuel.

Figure 6.1: European solid fuels import from Russia in percentages 2005-2017[67]

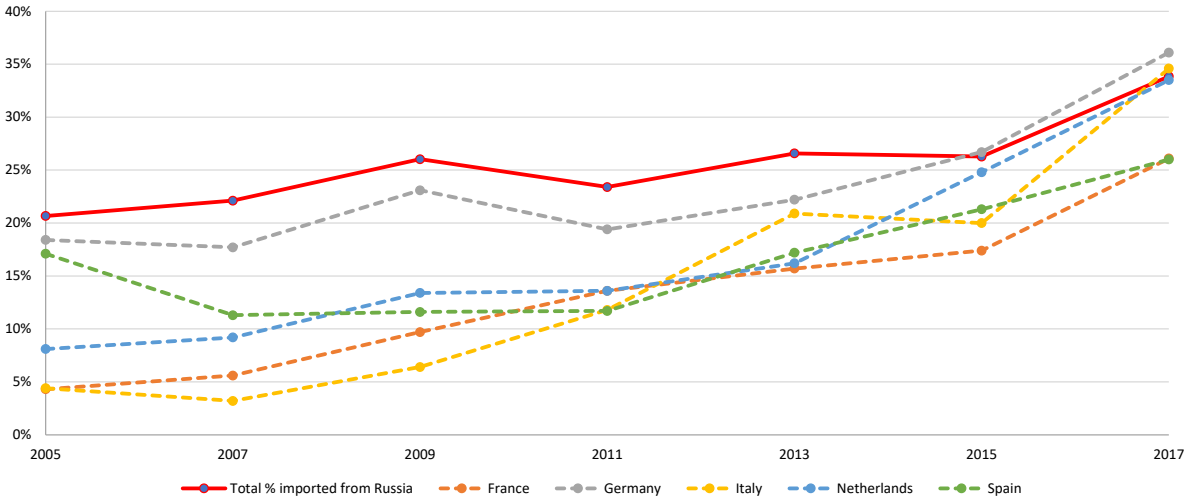
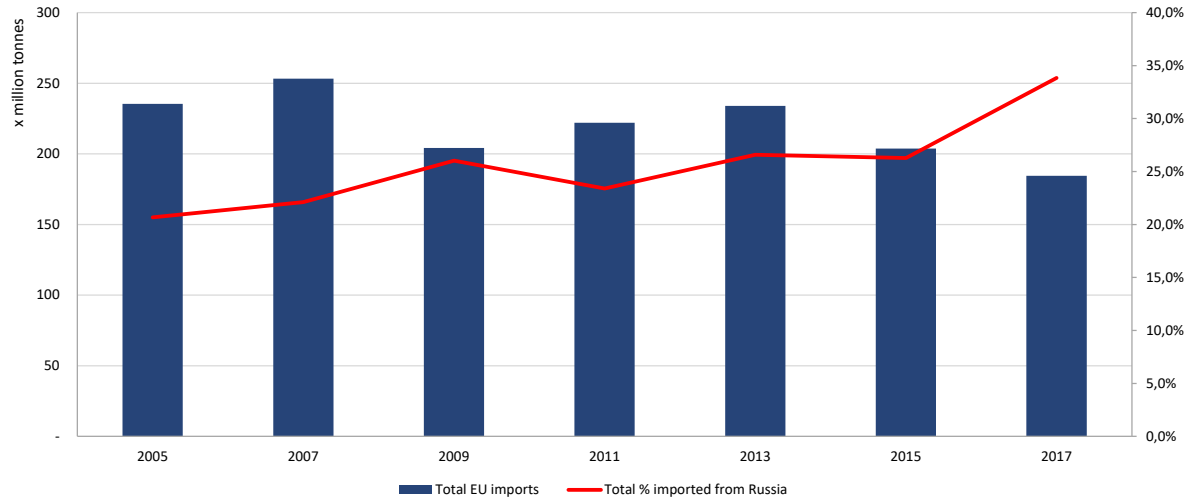


Figure 6.2: European soil fuels import in absolute numbers and percentage of solid fuels import from Russia 2005-2017[68]



[67] "*From where do we import energy and how dependent are we*?" Eurostat, accessed 1 March 2020, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html

[68] *"Solid fuels,"* Eurostat, accessed 8 March 2020, https://ec.europa.eu/eurostat/web/environmental-data-centre-on-natural-resources-old/natural-resources/energy-resources/fossil-fuels

Explanation for increasing Russian dependence

Given the context of the EU's energy sources diversification policies, reciprocal sanctions after 2014 and the political tensions between Russia and the EU, the outcome of increasing dependence on Russian energy may come as a surprise. However, the sanctions have left the energy sector largely unscathed. In fact, the rise of Russian energy supplies to the EU in this case has little to do with politics. This may seem quite contractionary given the earlier made statement that energy is linked with geopolitics. Along with that, there have been plenty of examples in which the political context has influenced EU's energy relations with Russia. Having said that, the increase of EU dependence on Russian gas can be found in the EU's economic recovery, lower prices of Russian gas and a decrease of gas production within the EU itself. In particular decisions to close domestic energy production like the nuclear power plants in Germany and the sudden decision of the Dutch government to close the gas tap by 2022. The loss of domestic production had to be compensated with more imported energy from outside of the EU. The reason the Dutch government made this drastic decision is because of the severe earthquakes caused by gas extraction and the unsafe situation that arose due to the collapse of houses as a result of these earthquakes.[69] Finally, the increase of foreign gas demand is also boosted by the global energy transition. EU policies support member states in switching their energy resources from the highly polluting goal to gas as cleaner alternative. All these mentioned factors for the increase of Russian gas to the EU are mainly commercial and not so much political.[70]

As concluded in the previous chapter, not all EU member states are evenly satisfied with this trend. In particular Eastern European member states have their reservations and are actively lobbying for a decrease of the European dependence on Russia. Unfortunately for them, Russian energy is gaining popularity despite their concerns and it is predicted that it will only increase further in the future.[71] Concerning gas, the Russian option is simply more attractive than (for example) Norwegian gas because of economic reasons. The weaker ruble makes Russian gas more competitive. The biggest competition to Russian gas is LNG, but so far it has not been very successful. This is the result of delays in LNG projects, a higher demand of LNG in Asia

[69] Bart Meijer, "Groningen gas output should be cut more quickly, says minister," Reuters, 22 May 2019, accessed 6 February 2020, https://www.reuters.com/article/us-netherlands-gas-earthquake/groningen-quake-prompts-review-of-dutch-gas-production-plans-idUSKCN1SS0CC

[70] Marco Siddi, "Russia's evolving gas relationship with the European Union," Energy Post, 15 October 2018, accessed 28 January 2020, https://energypost.eu/russias-gas-relationship-with-europe/

[71] "*Energy in Europe- State of play,"* European Environment Agency, 10 December 2019, accessed 18 February 2020, https://www.eea.europa.eu/signals/signals-2017/articles/energy-in-europe-2014-state-1

(mainly in China) and the higher prices of LNG compared to traditional transported natural gas. The LNG trade in EU began to increase in 2017, but unfortunately there is no access to the data of energy imports since then.[72]

In 2016, when it became clear that gas extraction caused serious earthquakes and measurements had to be taken to prevent further damage, the Dutch government considered the possibility of importing more gas for Russia. Encouraged by Eastern EU member states, the Dutch House of Representatives had their objections and asked to government for more clarity about the Dutch gas relationship with Russia. As a respond to their questions, the Dutch Minister of Foreign Affairs, Bert Koenders, Minister of Economic Affairs, Henk Kamp and Minister for Foreign Trade and Development Coorperation, Lilliane Ploumen wrote a letter to the Dutch Parliament. They note: "Russian products are structurally cheaper than most alternatives and there is already a lot of infrastructure present to bring the gas to the closet market (Europe). Although the price difference between LNG and traditional gas imports via pipelines has sharply declined in recent years and that trend seems to continue, LNG is often still relatively expensive compared to alternatives on the European market, partly due to high demand of LNG from Asia. For the time being, it is often more attractive for parties on the gas market to transport gas via pipelines to northwest Europe."[73] This letter is explementary for the Western pragmatism concerning the energy relations with Russia. In addition, it is important to mention that with a regard on energy security, not only dependence on Russia can be a threat for the EU but also imports from unstable regions like Iraq or Libya poses risks. For that reason, some EU states prefer dependence on Russia over dependence on Libya. Because this thesis is focused on the energy relationship with Russia, the risks of dependence on other states will not be further elaborated.

The energy relationship between Russia and the EU is mainly a strategic partnership. Even though Russia owns the resources that the EU needs and therefore the two partners are in unidentical situations, their relationship provides them the same benefits because Russia is not only a supplier of energy, it is also an economic partner. Mutual long-term benefits seek a balance in the interests and expectations of both sides. Essential in this case is that despite the usual media image, all relevant literature about EU- Russian energy relations agree that there

[72] Marco Siddi, "Russia's evolving gas relationship with the European Union," Energy Post, 15 October 2018, accessed 28 January 2020, https://energypost.eu/russias-gas-relationship-with-europe/
[73] Letter from the Government to the Dutch parliament concerning "the Dutch gas relation with Russia," 26 August 2016, accessed 30 January 2020, https://www.rijksoverheid.nl/documenten/kamerstukken/2016/08/26/kamerbrief-over-de-nederlandse-gasrelatie-met-rusland

is an interdependence between the EU and Russia instead of a unilateral EU dependence. While the EU needs Russia for its energy resources, Russia seeks ways to secure this energy demand that the EU market presents.[74]

Furthermore of importance, is that in addition to mutual dependence, the energy relations between the EU and Russia has been rendered more predictable due to the option of resulting long-standing commercial disputes. An early warning mechanism between Russia and the EU was established following the 2009 gas dispute between Russia and Ukraine. The system is an instrument aiming to ensure rapid communication and to prevent supply interruptions in electricity, gas or oil.[75]

Main energy trends in the EU society

A new European Commission, led by the German Ursula von der Leyen, was accepted by the European Parliament on 27 November 2019. They presented their plans for the future of the EU, with a special attention to their ambitious climate program. A quarter of the total EU budget is reserved for this so called "green deal." The most important principle of the plan is to reduce emissions to the aspiring 0% by 2050. One of the measurements that will be taken to achieve this goal is the implementation of a climate law with mandatory measures for all EU member states.[76] This naturally raises the question, what does that mean for energy consumption within the EU? Before that question can be answered, it is crucial to understand the current role of energy in the EU and the main trends of the recent years.

During her first week in office, Von der Leyen stressed the importance of inclusiveness regarding her green deal. In doing so, she particularly aimed to reassure the highly sceptical Eastern EU member states Poland, Hungary and the Czech Republic. The Commission's main priority is to get everyone on board, meaning every member state fully supports their deal. One of the concrete plans of the green deal is to completely transit to clean energy, meaning the elimination of the use of coals and the use of gas is only allowed if the CO2 emissions are being captured. The skepticism of the Eastern member states towards the ban of coal is not difficult to explain as in these countries, the economy, employment and energy supply are all still heavily

[74] Tichy, Lukas, *EU-Russia Energy Relations: A Discursive Approach* (Cham: Springer Nature Switzerland: 2019), 98
[75] "*Russia,"* European Commission, accessed 16 February 2020, https://ec.europa.eu/energy/en/topics/international-cooperation/key-partner-countries-and-regions/russia
[76] "*A European Green Deal: striving to be the first climate-neutral continent,"* European Commission, accessed 15 February 2020, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

dependent on coal mining. Therefore, they are vehemently opposed to the aim of making the EU climate neutral by 2050.[77]

What is remarkable, is that despite the increase of Russian energy import, the EU overall energy consumption has actually decreased since 2005. In 2017, the primary energy use of the EU was 9% lower than in 2005. Overall, the share of non-renewable fuels has decreased, while over the same period the share of renewable fuels has significantly increased. The main trends per fuel type used by the EU:

- Coal: the share of coal as primary energy consumption decreased from 18% in 2005 to 14.4% in 2017. The absolute consumption of coal decreased since 2005 by 2.7% per year with an overall total of 17%. Coal is mostly used for electricity generation. The decline of the use of coal is due to a combination of national policies, energy market developments and electricity generation of renewable sources.[78]
- Natural gas: the share of natural gas has hardly decreased, from 25% in 2005 to 24.4% in 2017. However, in absolute numbers the decrease was shaper as the absolute gas consumption decreased by 23% (2.9% per year). The side note to this trend is that since 2014, the gas consumption increased again by 16.6% (5.2% per year). In the past, gas-fired power plants ran continuously but various factors have affected their operations. Now they have reduced yearly operating hours by operating more often during peal-load times. Other factors that contributed to the reduced use of gas are the rapid increase in the production of electricity from renewable sources, the stagnation of electricity demand following the economic crisis of 2008 and the low price of coal relative to gas combined with low CO2 prices in the EU emissions trading system. This having said, increasing coal prices and national policies such as carbon pricing for electricity production resulted in the fact that since 2015, gas fired power plants have regained their competitiveness compared with coal fired power plants.[79]
- Oil: the oil share decreased from 33.9% in 2005 to 31.6% in 2017. The absolute consumption decreased by 15% (1.3% per year). Factors that have contributed to the decrease of the oil share in the primary energy consumption are the unprecedently high oil prices during some periods of time and the increasing use of biofuels in the transport

[77] "*A European Green Deal: striving to be the first climate-neutral continent,"* European Commission, accessed 15 February 2020, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
[78] "*Primary energy consumption by fuel in Europe*," European Environment Agency, 31 January 2020, accessed 17 February 2020, https://www.eea.europa.eu/data-and-maps/indicators/primary-energy-consumption-by-fuel-7/assessment
[79] Idem.

sector. Furthermore, EU regulations on CO2 emissions for cars and vans stimulated to the energy efficiency improvements on vehicles. But, similar as for the share of gas consumption, during 2014-2017 there was an increase in oil consumption. This trend is most like influenced by the recovery that followed after the economic recession of 2008.[80]

- Nuclear energy. As the EU does not import nuclear energy, this energy type is not discussed so far. Nonetheless, the share of nuclear energy in the EU energy consumption was 13.4% in 2017. Compared to 2005, when the overall share was 15%, there was a slight decrease. The absolute consumption decreased by 17% (1.7% per year). The explanation of this decrease can be found in the closing of several nuclear power plants in the wake of the Fukushima nuclear incident in 2011. Since then, the costs of nuclear energy have risen due to the extra investments regarding safety measures and maintenance of the power plants. In addition, it is notoriously difficult to dispose nuclear waste safely. As the aftermath of nuclear incidents always have a big influence on the public opinion, shifts in the public opinion also contributes to the decommission of nuclear power plants. These factors combined show why nuclear energy is not a very popular option for most EU member states.[81]
- Renewable energy: the share of renewable energy is the only primary energy consumption of the EU that increased. In fact, between 2005 and 2017 it more than doubled, going from 7.2% to 14.8%. The absolute consumption increased by 78% (5.5% per year). This growth can be attributed to significant cost reduction in renewable energy technologies. The rapid increase is furthermore stimulated by national and European policies to promote the use of renewable energy such as feed-in tariffs and premiums, obligations for electricity producers and obligations for using renewables in transport fuel. In fact, all EU member states have renewable energy policies and support schemes in places to help favour their use. The uptake of renewable energy varies between member states and energy market sectors, such as electricity, transport, heating and cooling.[82]

[80] "*Primary energy consumption by fuel in Europe*," European Environment Agency, 31 January 2020, accessed 17 February 2020, https://www.eea.europa.eu/data-and-maps/indicators/primary-energy-consumption-by-fuel-7/assessment
[81] Idem.
[82] Idem.

Despite their declining share in the overall energy consumption of the EU, solid fuels continue to be the dominant energy source. But the trend is clear, the EU relies less on solid fuels and the uptake of renewable energy went faster than predicted. The overall reduction of the use of energy of the EU can generally be attributed to energy efficiency improvements, structural changes in the European economy and the economic recession of 2008, which lowered the overall demand for electricity. Warmer winters as a result of global warming is another factor contributing to the decrease of energy use, as they reduced the amount of energy used in heating.[83]

The move away from solid fuels is quite prominent in many sectors, and figure 6.2 shows a clear decline in absolute solid fuel import. Between 1990 and 2015, electricity generation replaced coal and lignite by electricity generation from natural gas during the 1990s up to 2010. The main reason for the shift were the decreasing gas prices. More recently, due to a combination of earlier mentioned factors, natural gas lost ground too. Although economic factors have played the main role in the energy transition of the EU, environmental factors cannot be overlooked as well. Solid fuels are closely associated with air pollution and climate change. Combustion of biomass can have similar impacts on air quality and climate change. The consumption of solid fuels like crude oil and coal leads to resource depletion and emissions of greenhouse gases as well as emissions of air pollutants (for example nitrogen oxides and sulphur dioxide). This, in turn, has negative consequences for public health and biodiversity. The degree of environmental impact depends on the relative share of different solid fuels and the extent to which pollution abatement measures are used. It has become clear that the substitution of coal and oil with cleaner alternatives contributes to significant reductions in greenhouse emissions in sectors closely linked to electricity consumption in particular. In fact, this substitution also contributes to the ongoing energy transition in the EU from an energy system that is based predominantly on solid fuels towards a system based on renewable and clean energy sources.[84]

[83] "*Energy in Europe- State of play,"* European Environment Agency, 10 December 2019, accessed 18 February 2020, https://www.eea.europa.eu/signals/signals-2017/articles/energy-in-europe-2014-state-1
[84] Idem.

Russia

Far away in Russia's hinterland, hidden under the permafrost, Russia's greatest treasures: enormous gas and oil fields. The harsh conditions in the Arctic and Siberia make it difficult to get excess to these energy sources, but for Russia, these sources are invaluable.

Historical overview

Russia is known to have the largest natural gas reserve and the second largest coal reserve in the world. They are the largest crude oil producers with an average of 11.2 million barrels a day and the second largest produces or natural gas, producing an estimated 57.5 billion cubic feet per day.[85]

Since industrial times, Russia has been a central player in the world oil market. Czarist Russia was around the turn of the twentieth century the number one oil exporter in the world. During the Soviet era, they were the major supplier of oil and gas to their Comecon allies in Eastern Europe. The Soviet Union began exporting oil to the West in the 1970's. At that time, Israel was at war with Syria and Egypt and the West supported Israel during this Yom Kippur War. As a result, Arab countries had imposed an oil embargo against several Western states. In 1973 the first major Soviet natural gas pipeline to Western Europe was built and went to Germany. In the 1980's, due to dramatic fall in oil prices and a declining oil production, the Soviet Union lost a significant source of revenue. It is even suggested that this loss contributed to its collapse in 1991.[86] The disruption of the reform period and the turmoil that was connected to the fall of the Soviet Union further weakened the oil and gas production. An erratic process of privatization of energy supplies took place during the 1990's. Most of Russia's oil fields and some of its natural gas resources became privately owned, leading to a further sharp reduction of energy production in Russia. Foreign investment in the Russian energy sector was encouraged and many of the world's major energy companies invested in exploration, production or export projects in Russia. However, the largest share of Russia's gas and oil assets during the 1990's were acquired by only a handful of Russians often referred to as oligarchs. Some of them got control of the state energy riches in a legal manner during the tenure of the president Boris Yeltsin, but most oligarchs gained the resources by manipulation or through inside connections with governmental officials. The loans for shares program was one of the

[85] *"Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 4 May 2020, https://www.eia.gov/international/analysis/country/RUS
[86] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 117-118.

major schemes. Under the program, cash loans were provided by privately owned banks to the Russian government. In return, they received a payment in ownership of gas and oil reserves. Government officials often cooperated in order to ensure that the government would default on the loans, so it would be possible for lenders the acquire energy resources at bargain prices. The new private companies were successful in rapidly increasing the energy production and a lot of them became active in commercial investments abroad. Oil concern Yukos was at the time one the most successful companies.[87]

Most of Russia's oil production was in private hands when Putin came to power twenty years ago. His administration drastically changed the laissez-faire policy that had been common under Yeltsin towards private energy companies, foreign ownership and investment in Russia's energy sector. Kremlin leadership claimed to represent state interest clashed with a group of wealthy oil magnets that had dominated the energy sector since privatization. So Moscow started to raise significant taxes on energy exports in order to get a larger proportion of the profits. Owners surrendered en masse their energy properties and went into exile. The most extreme case is the one of Mikhail Khodorkovsky, former president of Yukos, who was eventually put in jail for tax evasion. The sale of the company's assets was manipulated so that state-controlled Rosneft was able to gain the controlling interest.[88]

After the Yukos affair, the growing role of state in both economic and energy affairs became viable. Within five years, a large proportion of Russia's energy sector was regained by the Russian state. Additionally, the Kremlin had full control over the oil pipeline transport system. Foreign investors in gas and oil production projects were further pushed out of the country in 2007 by using a series of threats to withdraw licenses for environmental reasons.[89] After Gazprom got involved in the projects that were relinquished by BP, Royal Dutch Shell and two Japanese companies, environmental concerns disappeared like snow in front of a sun. It is common for energy rich and oil producing states that revolutions and regime changes have as a consequence that production abruptly stops, and sometimes taking decades to recover. Russia managed to recover within nine years since the Soviet demise. Since 1999, energy export revenues have been crucial for Russia's economic performance. [90]

[87] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 117-118.
[88] Goldman, Marshall, "Putin and the Oligarchs," *Foreign Affairs* November/ December (2004).
[89] Ivanenko, Vlad, "Russian Energy Policy and Its Domestic and Foreign Implications," *International Journal* Vol. 63 No. 2 (2008) 263-274.
[90] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 120.

Russian energy sector

Russia's political leadership and the energy sector are closely intertwined in both formal and informal ways since its recovery. Formally, senior Kremlin officials take part in the board of major state-controlled entities like Rosneft, Transneft and Gazprom. There is something like a revolving door for officials between the leadership of the state-controlled companies and the formal political structure. A sterling example is the election of former Gazprom chairman Dmitry Medvedev as successor of Putin at the presidential election in March 2008. [91]

Several ministries and regulatory agencies are in both the oil and gas sector involved. The Ministry of Natural Resources and Environment issues field licenses, monitors compliance with license agreements and levies fines for violations of environmental regulations. General energy policies are developed and implemented by the Ministry of Energy. The Ministry of Economic Development is in charge of the supervision of tariffs while export taxes are the responsibility of the Ministry of Finance. The main regulatory agency that is involved in the gas sector is the Federal Antimonopoly Service. Pipeline tariffs, oversees charges of abuse of market dominance and charges that are related to third-party access to pipelines are regulated by this agency.[92]

The most important players in Russia's energy sector are Gazprom, Rosneft and Transneft. In 1989, Gazprom was established on the ruins of the Soviet Ministry of Gas Industry. The Russian government holds 51% of the shares, the rest is held by public shareholders. Shares were offered on the Russian stock market at the beginning of 1996. Gazprom dominates the market by producing 94% of Russia's natural gas production. In the global context, they hold about 25% of the world's known gas reserves and produces 16% of the global output. Not only are they the largest producer of natural gas in the world, they also control almost the entire natural gas production and pipeline network in Russia. While benefitting from their dominant position, Gazprom is also burdened with state responsibilities. By law, they are obligated to provide the gas for heat and power to Russia's domestic market for government regulated prices. These prices barely cover the production costs and are one tenth of the price Gazprom receives from the export of their gas from the European market. In addition, Gazprom is required by Moscow to build expensive pipelines as bypass and parallel pipelines to European markets in order to decrease Russia's dependence on transit states.

[91] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 122.
[92] *"Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 4 May 2020, https://www.eia.gov/international/analysis/country/RUS

Besides that, Gazprom is in the comfortable position that they are able to ward off any competitors due to their control over the pipeline system.[93]

The biggest company in the oil sector is Rosneft. Like Gazprom, the Russian state is the main shareholder. Although references of the company are traced back till the late 1800, Rosneft as it is today originated in 1995. After Yukos' demise, Rosneft managed to gain controlling interest and it became the leading company in the Russian oil sector.[94]

Russia has an extensive domestic distribution and export pipeline network. In the gas sector, Gazprom controls both extraction and the transportation. However, in the oil sector are extraction and distribution divided. The network system is almost completely controlled by Transneft. Transneft was established in 1992 as successor of Glavtransneft, which was a state entity during Soviet times. The only notable exception to their monopoly is the Caspian Pipeline Consortium (CPC) pipeline, which transports oil from Kazakhstan to Black Sea port of Novorossiysk. The CPC pipeline is a joint investment of several companies, but the largest share (24%) is owned by the Russian government, represented by Transneft.[95] Although private and foreign companies have the option to explore and produce oil and natural gas in Russia, they are dependent on the already existing state-controlled infrastructure for the export of oil and gas. Consequently, the newcomers must have a good relationship with those companies and with Moscow in order to gain access to the export infrastructure. The Kremlin is able to retain control over the activities of foreign and other independent producers through the mechanism of keeping control over the export infrastructure. [96]

Russian energy and domestic politics

Naturally, the enormous amount of energy resources in Russia has a high impact on the Russian economy which is driven by the energy export. Since the last quarter of the nineteenth century, revenues from energy export have been Russia's largest source of foreign earnings. Hydrocarbons, oil and natural gas revenues together account for 36% of the Russian federal budget revenues.[97]

---

[93] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 122.
[94] Idem, 119.
[95] *"Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 4 May 2020, https://www.eia.gov/international/analysis/country/RUS
[96] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 122.
[97] *"Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 4 May 2020, https://www.eia.gov/international/analysis/country/RUS

The heavy dependence leaves Russia at great risk to the fluctuations of the prices of energy. The technological transition of the world energy sector from the dominance of solid fuels to low carbon energy resources is particularly threatening for Russia. Relative to existing trends, it would mean a reduction of 16% in fuel exports and 8% in primary energy production. As a consequence, it is expected that the GDP growth in Russia will slow down in 2016-2040 by 1.7% to 0.6%. This was estimated before the COVID-19 crisis, so it is not unlikely that the Russian economy will now shrink instead of growth.[98]

In recent years, the energy sector provided 20-23% of GDP, 25-26% of consolidated budget revenues and 55-60% hard currency export revenues. The role of the fuel and energy complex in the Russian economy was at its highest around 2012, 2013. Affected by shifts in the world economy, the last seven years their role is slowly declining. According to the Global Russian Energy Outlook 2019, the added value by fuel and energy sector will rise by 20% in the Energy Transition scenario and by 40% in the conservative scenario while its share in Russia's GDP will decline to 14% and 17%. Due to the acceleration of the GDP growth in Russia, the end of the dominance of the fuel and energy complex in Russia's national economy is near. The share of the oil industry in the GDP generated by the fuel and energy sector will decrease from 74% in 2015 to 61% by the end of the period in the conservative scenario and to 47% in the Energy Transition scenario. This decrease is likely to be slightly compensated by the increase in the gas industry up to 51%.[99]

At the same time as the sanctions were imposed by the US and the EU, oil prices halved from an average of $109 per barrel to less than $50 half a year later. A lot of pressure was put on the Russian economy resulting not only in a financial loss but also making it more difficult for the Russian energy sector to invest in new projects. What is interesting to mention is the lack of innovation in the energy sector: in 2016, Gazprom and Rosneft spend respectively 0.095% and 0.02% of their turnover to research and development. To compare, Shell spend more than 10 times as much of their revenues on research and development.[100] As consequence, Russia is dependent on Western partners for technology transfers. This is very counterproductive, since some of its promising projects have been abandoned due to the

[98] *"Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 4 May 2020, https://www.eia.gov/international/analysis/country/RUS

[99] "Global and Russian energy outlook 2019," 2019, accessed 6 May 2020, Energy Research Institute of Moscow School of Management SKOLKOVO, 164.

[100] "*Royal Dutch Shell's expenditure on research and development from 2010 to 2019,*" Statista, last updated 23 March 2020, accessed 30 May 2020, https://www.statista.com/statistics/260315/spending-on-research-and-development-by-royal-dutch-shell/

sanctions. Especially high-cost projects such as in the Arctic, shale and deepwater faced the consequences of the sanctions and the fall in oil prices.[101] This resulted in a dramatic decline in Russian state revenues from oil and natural gas. In response to the grown state's budget deficit, the Russian government implemented a series of measures to increase revenues. Over the recent years, export taxes on hydrocarbons and mineral extraction tax have changed several times and the dividends from oil and gas companies of which the state is shareholder were collected. In 2016, state-controlled companies were forced to pay at least 50% of net income as dividend, almost double of the dividends companies normally paid. Oil companies objected these plans and argued that they divert money from programs focused on capital investment. Rosneft negotiated a lower dividend based on similar arguments, but over 2017 they planned to pay 50%. Alongside the tax increase and dividend payment, the Russian government sold some of their shared in several Russian companies, including Rosneft and Bashneft, but they kept enough shared to retain a controlling interest. It is also possible to compensate revenue losses by increased prices. This development can be considered as a typical indicator of energy politics Russia's willingness to increase its advantage on the world market. Russia, the Organization of the Petroleum Exporting Countries (OPEC) and several other oil-producing states entered an agreement to limit production throughout 2016 in order to stabilize the oil market and regulate production depending on market demand. They extended the oil extraction cuts up to the end of March 2018.[102] During a bilateral meeting in the margins of the G20 Summit in Osaka in June 2019, Putin and Saudi Arabia's crown prince Mohammad Bin Salman agreed to extend the production cut again for a period of six to nine months.[103]

The cooperation between Russia and OPEC stopped in March 2020 when Russia and Saudi Arabia (one of the most prominent members of OPEC) got into a trade war. The international demand for oil dropped to the lowest point in the last 15 years as a result of the COVID-19 crisis. During the summit in Vienna in March, OPEC called for an even further reduction of oil production. To Russia, this demand seemed pointless and ineffectual, so they rejected the request and started to increase its production. Directly after the announcement, oil prices dropped with 30% and the ruble lost 10% compared to the dollar. Few days later, Saudi Arabia announced an unexpected price discount on their oil, basically initiating a price war with

[101] Pierini, Marc, "Russia's Energy Politics and Its Relevance for the European Union," *IEMED Mediterranean Yearbook 2019*
[102] *Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 6 May 2020, https://www.eia.gov/international/analysis/country/RUS
[103] Pierini, Marc, "Russia's Energy Politics and Its Relevance for the European Union," *IEMED Mediterranean Yearbook 2019*

Russia. The market got overwhelmed with cheap oil. Although officials from both states have denied that they are engaged in a price war with each other, the conflict ended in April when the leaders came to an agreement to limit production again. The role of the US in this remained unclear, but he events were broadly covered in the American press. In the EU, the war was noticed but states were more focusing on the corona crisis.[104]

Alongside the direct impact of the energy sector to the development of the Russian economy, it should be mentioned that the energy sector makes a significant indirect contribution, in particular though the power play between fuel and energy prices for consumers and through the size of capital investments in the production and use of energy resources. As President, Putin is a declared supporter of state involvement in the energy sector. He has stated that regardless of the ownership structure, the Russian state must play an active role in the regulation of the development and use of the energy sector. Therefore at times, state-controlled companies are compelled to undergo tasks that are determined by the state or by prices that were determined by the state which often leads to chagrin of company managers and private shareholders.[105]

Rather than continuing the current heavy reliance on the energy industry, diversifying Russia's real economy would bring new types of challenges for the Kremlin as the means to control the economy are far weaker than the state institutions that control Russia's energy sector. Most governments of energy export driven states are conservative in their thinking, making achieving economic diversification a major challenge. Given the global trends such as the shift toward LNG, the request for renewable energies but also domestic developments like the need to modernize Russian infrastructures in order to maintain energy competitiveness and the necessity to move away from the energy dependence economy are challenges for Russia's energy politics. It is likely that energy politics will remain a key component of the countries presence in world politics, however they need to evolve their strategies to respond to today's fast-changing environment.[106]

---

[104] Joshua Yaffa, "How the Russia-Saudi oil war went awry-for Putin most of all," *The New Yorker,* 15 April 2020, accessed 31 May 2020, https://www.newyorker.com/news/dispatch/how-the-russian-saudi-oil-war-went-awry-for-putin-most-of-all

[105] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 122.

[106] Pierini, Marc, "Russia's Energy Politics and Its Relevance for the European Union," *IEMED Mediterranean Yearbook 2019*

Russian energy and foreign politics

An integral element of Russia's overall foreign policy are the energy export policies. It was already mentioned that the energy sector plays an important role in domestic politics, but naturally they also effect the state's foreign policy. Meanwhile, compared to other major energy producers, Russia has a far more diversified economy than most of them. In particular compared to Persian Gulf states, which are almost fully dependent on their oil export.

A study, carried out in 2018 by the European Parliamentary Committee on Foreign Affairs (AFET), studied how energy-exporting countries and in particular Russia, use energy as a means to protect and promote their foreign policy interests. They argue that the foundation of Russia's energy wealth are their incredible energy resources and their vast system of pipeline networks. This combination has created a system in which countries became dependent on Russia for their energy supplies, thereby creating broader economic and political dependencies which translates into a source of power for Moscow.[107]

There is a central role for geography in Russia's energy export opportunities and policies. The world's two major energy import markets, the EU and China, both border Russia, making it the obvious supplier. Russia's geography, in particular its size and climate serve at the same time as potential constraint. Due to its climate conditions, Russian ports are not year-round operational. Consequently, the energy sector is dependent on routing exports through transit states.[108]

The AFET committee concludes that the Russian governments perceives its energy resources as a strategic resource to stimulate economic development and as important geopolitical tool. Policy documents show that reducing the dependence on transit states is a major feature in Russia's energy and foreign policies. In the *Energy strategy of Russia for the period up to 2030* it is mentioned that "export infrastructure must be sufficiently diversified to allow exports in all directions."[109] Due to limited sea access for oil export and the need to rely on pipelines to export natural gas, Russia is dependent on transit states to export the bulk of its natural gas and a large proportion of its oil. Their dependence and their drive to reduce their vulnerability are both important aspects of Russia's energy export and foreign policies.

[107] "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament, 7.
[108] Pierini, Marc, "Russia's Energy Politics and Its Relevance for the European Union," *IEMED Mediterranean Yearbook 2019*
[109] "Energy strategy of Russia for the period up to 2030," 2010, accessed 2 May 2020, Government of the Russian Federation, 168.

Complicating Russia's energy export is the fact that some of Russia's transit states are NATO members with whom they do not have particularly friendly relations. Most of Russia's oil export goes through the port of Novorossiysk on the Black Sea and through transit states along the Druzhba (friendship) pipeline to Eastern Europe, both vulnerable and complicated routes. In 2013, the Russian Ministry of Foreign Affairs stated that "strengthen its strategic partnership with major producers of energy resources while actively promoting dialogue with consumers and transit countries" is Russia its goal in the energy field. This did not turn out as general objective as Russia quickly translated it in actions in both the oil and gas market such as spending large funds to build transit pipelines, weighing on prices, investing in the North African and Middle Eastern region, increasing its supply to Asia while mastering its supplies to the EU.[110]

If energy is used as geopolitical tool, natural gas through pipeline lends itself better than crude oil supplies. Brenda Shaffer, professor at Georgetown University and specialist in energy policies writes that Gazprom's policies are shaped by both commercial considerations as well as Russia's foreign policy objectives. According to her, not every bit of Russia's energy policy is dictated by geopolitical motives, but if so, they exert political pressure through the following means: manipulating pricing policy of energy supplies to third countries, controlling energy assets such as pipelines and gas operations in key countries, cutting or disrupting gas supplies, agreeing restrictive supply contracts and developing alternative supply routes. She supports the view of the AFET committee that Russia gains geopolitical influence by making investments in the energy sectors of geopolitically relevant countries such as Iraq or Venezuela.[111]

It is known that Russia is investing in energy links with China and other Asian countries. When completed, it allows Russia to supply very large energy markets and it would reduce the dependence of Russia on the European gas market. Yet, Shaffer argues that one of Russia's main energy goals is to sustain its role as the main exporter to the European gas market. To ensure their position, Russia invested in extremely expensive infrastructure that bypasses transit states and purchasing routes that potential competitors such as Iran and Turkmenistan could allow to enter the European market directly.[112]

[110] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 116.
[111] "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament, 9.
[112] Shaffer, Brenda, *Energy Politics* (Pennsylvania, University of Pennsylvania Press, 2011), 117.

Russia and Europe

Russia has developed strong political and economic relations with their key purchasers, in particular with Europe. The energy sector profited from this relationship when they were excluded from European sanctions following the Crimean annexation and the conflict in Eastern Ukraine. That did not stop the United States for imposing strict sanctions. Amongst other measurements, the sanctions limited Russian firms' access to the US capital markets, in particularly four big Russian energy companies: Novatek, Rosneft, Gazprom and Transneft. The U.S saw an opportunity to target their energy competitors and took it. Furthermore, the sanctions prohibited the export of Russian goods, services and technology in support of deepwater, Artic offshore and shale projects. In 2017, additional sanctions on entities or persons providing support to energy export pipelines were imposed. This does not mean that the EU did nothing in 2014. They did impose similar sanctions under American pressure, but the left the energy sector mostly out of it.[113]

According to the Energy Information Administration, it is unlikely that Arctic offshore and shale resources can be developed without the help of Western oil companies. However, it is expected that the sanctions on the short term will have a minor effect on the Russian production as these resources are not going into production for 5 to 10 years at the earliest. But the immediate effect of the sanctions is visible, as they have reduced the large-scale investments that Western firms planned to make in these resources. That does not stop Russia from currently constructing the 'Power of Siberia,' a new pipeline to China. This creates a second major gas market for Russia and as a result, the Russian dependence on gas income from the EU will decrease. The AFET committee fears that this will create more space for Russia to pursue "a more assertive foreign policy, possibly against European interests. [..] A long as Russia is dependent on Europe as its primary export market, its ability to use its energy muscle to promote its foreign policy objectives is constrained."[114]

While Russia is concerned with the access and security of its energy markets, some purchasers including the EU, wonder whether Russia can be trusted as a reliable energy supplier. The conclusions of the AFET report are firm. They conclude that Gazprom is able to abuse their market power due to their monopolist role. Furthermore, they state that the antitrust

[113] *"Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 4 May 2020, https://www.eia.gov/international/analysis/country/RUS

[114] "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament, 11.

investigators of the EU are an important instrument to control if Russia is pursuing monopolistic practices which there are able to by creating dependency and keeping markets fragmented. [115]

In 2011, the EU Commission had launched an antitrust investigation after accusations of Gazprom's abuse of their dominant market position in Eastern Europe. According to Commission, Gazprom contracts hindered cross border flow of gas which resulted in fragmentation of regional market and different prices per country. In the ensuing negotiations, Gazprom committed to remove contractual barriers to cross border flow of gas. It linked gas prices in Eastern EU to benchmark prices in Western EU hubs. Gazprom's commitments will adjust prices in Eastern Europe because they are isolated due to lack of infrastructure to market-based prices Western Europe. Gazprom avoided a fine imposed by the commission by making these commitments. They had to make important concessions and essentially change its marketing strategy from oil-linked contracts to more market-based lower prices. Failure to honor the commitments could still lead to Gazprom being fined over the next years.[116]

Meanwhile, Russia filed a complaint with the WTO about the EU in April 2014. In 2009, the EU Commission had introduced a third energy package with the aim of integrating the EU energy market and increasing competition. One of the requirements is unbundling the ownership of energy production and supply from that of energy transportation. Russia argued that this legislation treated Russian gas and gas transport unfairly. The WTO ruled that the main principles are lawful, but some aspects were not in line with WTO norms.[117]

In his article "Russia and Europe's mutual energy dependence," Christophe- Alexandre Paillard argues that Eu-Russian energy relations are a two-way phenomenon. He stresses that EU leader do not realize how fragile Russia is considering their own energy dependence.[118] The AFET committee acknowledges that there is a system of mutual dependence, but they conclude that Russia is creating this system. Therefore, they ignore the fact that the EU itself does little to diversify the number of their energy suppliers. In the report, they write that the current situation is so that Russia is dependent on the EU as their primary export market, but they fear this could change. "Russia's use of energy blackmail as a tool in Europe will increase as Russia diversifies its markets, primarily by developing its energy ties to China."[119] They expect the

[115] "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament, 35.
[116] Marco Siddi, "Russia's evolving gas relationship with the European Union," Energy Post, 15 October 2018, accessed 28 January 2020, https://energypost.eu/russias-gas-relationship-with-europe/
[117] Idem.
[118] Paillard, Christophe-Alexandre, "Russia and Europe's mutual energy dependence," *Journal of International Affairs* Vol. 63 No.2 (2010): 65-84.
[119] "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament, 36.

role of Russian energy on the European market to growth and therefore they suggest the EU to prepare for a future where Russia might be in a position in which they use their energy supply as foreign policy tool. The European Commission should be on making sure that the internal energy market works properly. The best insurance for a stable energy supply is to focus on the availability of alternative supplies. This can be created by enforcing new EU energy laws, building sufficient gas infrastructure and storage within the EU, promoting availability of alternative sources such as LNG and promoting transparency on contracts. They even suggest the European Commission to negotiate energy contracts with suppliers on behalf of EU member states. However, they should realize that this idea is against the principle of a liberalized energy market. EU member states are currently free in their decision of their energy mix and various suppliers are able to compete with each other. The AFET committee realizes that such collective bargaining is only possible on voluntary basis. With the current divisions within the EU about Russia as energy supplier, it is not likely that something like collective bargaining will happen soon.[120]

Maroš Šefčovič, former Vice-President of the European Energy Union held a speech about the 'State of play of EU-Russia energy relations.' According to him, interdependence in the field of energy will remain foreseeable in the future. Security of gas supply currently dominates todays discussions, but energy relations between the EU and Russia are not limited to gas. The EU should focus on the Southern Corridor and new liquid hubs in the Mediterranean region and Central and Eastern Europe. He furthermore pledged for a fully developed LNG strategy.[121]

[120] "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament, 36.
[121] "*Speech: The state of play of EU-Russia energy relations,"* Europa Nu, published 25 March 2015, accessed 23 May 2020, https://www.europa-nu.nl/id/vjsjjrbvpiyy/nieuws/speech_the_state_of_play_of_eu_russia?ctx=via2fu30lxxr

Conclusion

In the energy policies of the EU, the European dependence on Russian energy is an important factor. The Soviet Union started to export oil to the West after the first oil crisis in 1973, and since then energy trade has been a key feature in relations between the EU and Russia. Energy and geopolitics are closely related to each other. Gas and oil trade have shown many examples such as the oil crises and gas disruptions due to political tensions. Disputes between Russia and Ukraine exposed the vulnerability of the EU regarding their dependence on Russian energy. Energy became one of the most politicised topics within the EU and it deeply divided its member states.

It is expected that the energy demand of the EU will increase in the upcoming years. Simultaneously, several member states closed their domestic coal and nuclear power stations which means that a lot of extra import capacity is needed to meet the extra demand. These projects are not uncontroversial, as critics like to emphasize the increasing dependence of the EU on Russia. This thesis investigated how the dependence of the EU on Russian energy was characterized during 2005 and 2017 and how it reflects in European energy policy.

The first common EU energy policy was published in January 2007. During the 1990's, there had been several attempts, but member states did not manage to formulate a common policy. A new impulse for this was given during the so-called Hampton Court meeting in 2005. All European leaders came together to discuss several aspects of the future of Europe, amongst which energy was one of the topics. After the meeting, a paper about energy challenges was published by the EU Commission. This was followed by the establishment of a European Energy Council. The Council examined the possibilities for a common energy strategy and wanted to deliver a European response to new energy challenges such as increasing import dependency, volatile energy prices, a strong growing global energy demand and global warming. The Commission wanted to go a step further as they pushed for a common policy instead of a common strategy. When the first common policy was presented, it was basically an elaboration of the energy strategy that was published a year before. Sustainability, competitiveness and security of supply became the pillars of the EU energy policy. In the policy, the Commission stressed the political and economic risk of energy dependence. They proposed an action plan that was focused on the creation of an internal energy market as they believed this would decrease member states dependence on their energy supply. Although the Commission indicated that they have confidence in the EU's energy suppliers, the desire for diversification remained. They made three proposals in order to promote energy security. The

first proposal was to assist member states to diversify their sources, the second one was the development of projects with gas from new regions and the final proposal was the make investments in storage and pipeline capacity of strategic gas stocks.

The most important change in the process of creating a common policy was the Treaty of the Functioning of the EU. This was a part of the Lisbon Treaty that was singed on the 1st of December 2009 and shaped the EU as it is today. With the treaty, member states transferred exclusive control over several strategic areas, including energy, from national level to European level. Energy policies shifted from the exclusive authority of individual member states to primary legislation. This means that from then foreword, all energy related issues were included in the shared powers of the EU and its member states.

Several gas disputes in 2006 and 2008 between Ukraine and Russia had a direct impact on EU citizens as the disputes resulted in disruptions of gas supplies. The topic of energy security began to gain dominance within Europe's political debate and it became evident for EU policy makes that the European strategies regarding energy security and the approach towards energy supply had to be revised. However, the splintered policy landscape within the EU made it difficult to harmonize and integrate Europe's energy governance. A great push for the EU into dealing with these problems was the annexation of the Crimean Peninsula in March 2014. As tensions between the EU and Russia heated, the EU feared (partial) reduction of Russian energy and energy security became the number one topic in the EU. In response to those concerns, a new energy strategy was released by the Commission two months after the annexation. The emphasize of the strategy was on a stable and abundant energy supply. The report turned out to be one of the first signs of the changing climate of the EU's energy policies as it was written with a remarkable geopolitical tone. The collective approach became the core of new energy policies as the Commission stressed the need for cooperation and solidarity amongst EU member states. Another major impulse towards a unified energy policy came from the then President of the European Council, Donald Tusk, when took the opportunity to propose an Energy Union. Jean-Claude Junker, at that time President of the European Commission, picked up the idea of the Union and in February 2015, the Strategy for the Energy Union was accepted. Energy security, sustainability and competitiveness remained the same pillars as the earlier adopted energy policy, but the central point shifted from security to resilience. Reducing overall dependence of EU economies became key to enhance resilience.

The reason that less emphasis was placed on a collective approach was due to the fact that member states still had their own energy policies besides the ones from the EU. The Commission tried hard to pursue common policies but there were structural obstacles for having

one. As energy policies are considered as component of national security, it is understandable that member states have shown not much willingness to give up energy related sovereignty. Furthermore, one of the difficulties in the negotiations for a common policy is the disunited attitude and the different energy structures of member states.

The Nord Stream pipeline project is a perfect example of the difficulties of the formation of a common European energy policy. The project created friction between several member states and has ignited heated debates. Central to the debate is the dependence on Russian energy. Countries like Germany, Austria, the Netherlands and France were in favor of the project and argued that it is a solution for the increasing energy demand in the EU. Opponents like Poland, Slovakia, Romania and the Baltic states pointed out that the project increases the European dependence on Russian energy and they fear Russia might use that as political leverage. The Commission was stuck between these opposing views and at first, they tried to define a legal framework. Their request was rejected by the Legal Service of the Council and so the project went ahead, and the construction started in April 2010. Despite the tensions and frictions that the project causes, a second pipeline, known as the Nord Stream 2, has now been constructed.

A legal footing for energy relations is in the interest of all trade partners in order to enhance certainty. Although several multilateral and bilateral legal instruments have been created since the 1990's, a current comprehensive and effective legal energy framework does not exist. However, there are some regimes that have created a strong basis for EU-Russian energy cooperation. The first one that came into existence is the Partnership and Cooperation Agreement. The agreement is an overall framework for political dialogue with the aim on free trade and a special emphasis on the energy sector. The Energy Charter Treaty was created to combine Western concerns and interests regarding the security of energy supplies with the Eastern energy assets. The treaty is a binding legal instrument and it is the only one between the EU and Russia that deals with the energy sectors and includes both governments and private parties. During an EU- Russia summit, the Energy Dialogue was established. The dialogue is aimed at integrating both energy markets, reforming the Russian energy industry and trying to incorporate the existing rules of the EU energy market in Russia. Although they annually publish their results in several reports, the effectiveness of the dialogue is limited because of its non-binding nature. The final legal instrument is the World Trade Organization. It is not a specific EU-Russia agreement, but they enjoy a high degree of legitimacy that can be attributed to the thickening of legality and effective dispute settlement. The WTO is worth mentioning because energy trade has dominated the WTO negotiation agenda, even though it is not addressed as distinctive sector. The main difficulty for the EU to come with a special energy

framework with Russia are the considerable diverge of interests between all EU member states. In particular between Western and Eastern states, it has been difficult to reach agreement and find acceptable compromises.

The primary energy consumption of the EU consists for 72% of crude oil, natural gas, solid fossil fuels. The remaining part is composed of renewable and nuclear energy. Concerning energy, the EU is a net importer, meaning they import more energy than they produce themselves. Especially oil, gas and solid fuels are largely imported, renewable and nuclear energy are mostly produced with the EU itself. For 2017, 30.3% of oil, 39.8% of the gas and 38.8% of solid fuel came from Russia, making it Europe's main supplier. It should be noted that there are clear patterns between different member states. Concerning oil, the most dependent member states on Russia are Slovakia (74.0%), Finland (71.9%), Poland (68.5%), Lithuania (61.8%) and Bulgaria (50.2%). This is compensated by eight member states that import 0% of their oil from Russia. However, every member state is depended on multiple suppliers. With regards to gas, a different dependence pattern emerges. Finland, Estonia, Latvia and Bulgaria get 100% of their gas from Russia and five other member states have no other external supplier as well. On the other hand, eleven member states do not have any gas connection with Russia. A clear pattern of dependence is also visible with regard to solid fuels. Russia is exporting the most solid fuels to Estonia (100%), Latvia (98.2%), Lithuania (94.4%), Greece (90.0%) and Bulgaria (81.7%). Six member states do not import any solid fuel from Russia. The entire overview of the origin of energy imports per member state can be found on page 24-26.

What can be concluded from this is that the number of suppliers and the extent of dependence of each member state on Russia varies heavenly between oil, gas and fossil fuels. The EU developed a dependency rate to determine to what extend the EU is dependent of energy import. The overall EU dependency rate is 55%, meaning the import more energy than they export. The question is, is dependency a problem? To answer that, the total dependency rate of each member state with the extent they depend on their main suppliers should be combined. A high proportion of energy imports among few external partners possibly threatens the stability of the EU's energy supply. Therefore, it can be stated that a low dependence rate is not the only factor in energy security, the number of external suppliers is just as important. The EU import picture of today is still dominated by few major external suppliers, of whom Russia is by far the biggest one. This problem is reflected in European policy which focuses on diversifying sources and suppliers of energy. The Southern Gas Corridor is one of the key projects of the

EU in their diversification efforts. Furthermore, the EU is expanding the LNG import capacity and is strengthening the reverse flow capacities.

The influence of Soviet heritage is still visible in the current European energy landscape. Most of the new member states that joined the EU since 2004 are still disproportionately dependent on Russia as energy supplier as a result of the old Soviet infrastructure. This higher degree of dependency has led to contrasting attitudes where Western European countries deal with Russia's energy in a pragmatic way while Eastern European countries lobby at EU level to break away from Russia in an attempt to reduce their overreliance on Russian energy. Policymakers at European level find it difficult to deal with these contrasting views. They are sensitive to arguments from Eastern European states in regard to dependence on Russia, but at the same time they do not want to disturb their cherished free market. This is reflected in European policy through calls for cooperation, a joint approach et cetera, but few concrete measures have been taken to drastically diversify the number of suppliers. Such big decisions are not taken immediately, but even after many years of debate, it turned out to be difficult for the EU to make acceptable decisions that please all member states.

Besides an overview of EU dependence in 2017, the development of the dependence on Russian energy per energy sector since 2005 is compared to determine if the EU has become more or less dependent on Russian energy. In Chapter 3: Increase or Decrease, the five member states that import the most energy are included in the figures because they gave a nice idea of the development of European energy imports. However, because they only indicate the dependence development at an individual member state level, they are less relevant for the conclusions. Therefore, they shall not be discussed, and the conclusions are only based on the total percentage that was imported from Russia. Starting with oil, figure 5.1 shows a small increase of 1.2% between 2005 and 2017. In absolute numbers, the amount of oil that was transported from Russia to the EU decreased. Surprisingly, the gas import from Russia has increased with the exact same amount of 1.2% between 2005 and 2017 but other than oil, the absolute import has increased as well. Solid fuels increased even with 13.1% between 2005 and 2017, but their absolute import decreased. To conclude in short: EU dependency on Russian energy increased in the oil, gas and solid fuel sector.

This outcome seems to be surprising given the political tensions between the EU and Russia and the desire of the EU to diversify its sources. As mentioned before, the EU has done not that much to actually diversify their energy suppliers and these measures take a very long time to implement and execute. The sanctions which the EU imposed following the events in 2014 left the energy sector largely unscathed. The explanation for increasing dependence can

be found outside politics as they are mostly economic reasons. Increasing dependence can be explained by the economic recovery of the EU since 2008, lower prices of Russian energy, a decrease of domestic energy production which needed to be compensated and a boost from the global energy transition in switching from coal to gas. Although not all member states are pleased with these developments, Russian energy is the most logical option as it is the most competitive one in terms of prize and possibilities. The infrastructure already exists, and Russian energy is structurally cheaper than its alternatives.

Unfortunately, there was no data available after 2017 but looking at several EU policies gave some insight into future European energy trends. What is remarkable, is that despite the increase of Russian energy import, the EU overall energy consumption has actually decreased since 2005. In 2017, the primary energy use of the EU was 9% lower than in 2005. Overall, the share of non-renewable fuels has decreased, while over the same period the share of renewable fuels has significantly increased. The overall reduction of the use of energy of the EU can generally be attributed to energy efficiency improvements, structural changes in the European economy and warmer winters. This fits into the policy of the new President of the European Commission, Ursula von der Leyen, who presented an ambitious climate programme. The Commission wants to reduce carbon emissions to 0% by 2050. Concerning energy, they proposed to completely transit to clean energy, meaning the elimination of the use of coals and the use of gas is only allowed if the CO2 emissions are being captured.

It is not a coincidence that Russia is Europe's main energy supplier. Not only are they Europe's neighbor, they also possess the largest natural gas reserve and second largest coal reserve in the world. Like all industries, the energy sector was state business during Soviet times. After the revolution a capricious process of privatization of the energy sector took place. Yeltsin encouraged foreign investments but most of the shares of energy enterprises were acquired by oligarchs either through a legal manner or, as in most cases, through connections and manipulations. When Putin came into office, he stopped privatization and regained the controlling share in energy affairs. Since then, the energy sector and Russian leadership are both formally and informally closely intertwined.

Several ministries and regulatory agencies that are involved in the energy sector are: the Ministry of Natural Resources and Environment, Ministry of Energy, the Ministry of Economic Development, the Ministry of Finance and the Federal Antimonopoly Service. The most important players in Russia's energy sector are Gazprom, Rosneft and Transneft. Gazprom dominates the gas market as they control almost the entire gas production as well as the pipeline network. As the state holds the majority of shares, this leaves Gazprom with benefits such as

warding off any competitors but also with responsibilities like providing Russia's domestic market against prices that hardly cover any production costs. The main stars of the oil sector are Rosneft and Transneft. Like Gazprom, the Russian state is the main shareholder, but the difference between the gas and oil sector is that in the oil sector, extraction and distribution are divided. Rosneft controls everything concerning extraction, while Transneft has the monopoly over the extensive pipeline network. The Caspian Pipeline Consortium is the only exception to this. Although private and foreign companies have the option to explore and produce oil and natural gas in Russia, they are dependent on the already existing state-controlled infrastructure for the export of oil and gas. Consequently, the newcomers must have a good relationship with those companies and with Moscow in order to gain access to the export infrastructure.

Compared to other major energy producers, Russia has a far more diversified economy than most of them. Nevertheless, Russia's economy is driven by the energy export, as revenues from energy exports account for 36% of the Russian federal budget revenues. Naturally, this heavy dependence entails several risks. Particularly threatening for Russia is the global transition into clean energy and price fluctuations. The Russian government understands that and since several years, the role importance of energy revenues is declining. Nevertheless, as energy revenues are still dominant, Russia has received some big hits recently. Imposed sanctions resulted in halving of the oil prices. Not only was that a big financial loss, it also meant troubles with investing in new projects. And precisely those projects, is where it hurts. Russia is dependent on Western partners for technology transfers, but due to the sanctions some promising projects in the Arctic have been abandoned. In response to the grown state's budget deficit, the Russian government implemented a series of measures to increase revenues. They increased taxes, forced dividends payments and even sold some shares, although they kept enough to remain the majority. Eventually, they agreed with the demand from OPEC to limit production between 2016 until 2020. However, their cooperation ended in March 2020 when Russia increased its production against OPEC's demand. This immediately backfired and at the end of April they reached an agreement in which they settled on new production limitations.
Alongside direct contributions, the energy sector makes a significant indirect impact as well. Therefore, Putin is a declared supporter of state involvement in the energy sector. There are a lot of challenges for the Russian energy sector such as shifts to LNG and renewable energy, the need to modernize domestic infrastructures and to maintain their competitiveness. Yet, the most important challenge is going to be economic diversification.

The Russian energy sector is not only a valuable component of their domestic politics, it also contributes to Russia's foreign politics. The conclusions of the influence of the energy

sector on foreign policies are based on the conclusion of the AFET committee of the EU. They conclude that the Russian government uses their energy resources as strategic resource to stimulate economic development and as important geopolitical tool. The combination of an enormous amount of energy resources and a vast system of pipeline networks has resulted in a system in which countries became dependent on Russia for their energy supplies, thereby creating broader economic and political dependencies which translates into a source of power for Moscow.

What is interesting, is that AFET committee barely discusses the topic of mutual dependence. Several scholars have brought up that the energy relationship between the EU and Russia has a balance in interests and expectations on both sides. Christophe- Alexandre Paillard pointed out that that EU leaders do not realize how fragile Russia is considering their own energy dependence. In European policy, the fear op dependence is evident, as diversification is stressed time and again. However, Russia is also aware of the risks of dependence. This can be concluded based on policy documents that have shown that reducing the dependence on transit states is a major feature in Russia's energy and foreign policies. In order to meet this objective, Russia invests in new energy links with China and other Asian markets. The AFET committee has noted these developments and fears that it will provide Moscow an opportunity to pursue a more assertive foreign policy. They make several suggestions for the Commission to take upon in future energy strategies/ policies. Their most important conclusion is EU should be to prepare for a future in which Russia might be in a position in which they use their energy supply as foreign policy tool.

This brings us to the core of the thesis. The EU is dependent on Russia as main supplier when it comes to oil, gas and solid fuels. Although there is a mutual dependence in the energy relationship between the EU and Russia, the EU fears disruptions in the energy trade. This is reflected in EU policy that, since 2009, has been made at a European level in addition to national policies. The core of EU energy policy is diversification of energy sources, decreasing dependence and a desire for a collective European approach. The latter proves difficult, as dependence on Russian energy has deeply divided the EU. Based on their past and economic motives, member states have different feelings towards Russia's motives. Nevertheless, events in 2014 seem to have changed the European perspective and there has been more unity within the EU since. After all, the security of energy supply, and with that the future of Europe, is at stake.

Sources & literature

Online sources

European Commission

- "*A European Green Deal: striving to be the first climate-neutral continent,"* European Commission, accessed 15 February 2020, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
- "*Diversification of gas supply sources and routes,"* European Commission, accessed 28 January 2020, https://ec.europa.eu/energy/en/topics/energy-security/diversification-of-gas-supply-sources-and-routes
- "*European security strategy*," European Commission, accessed 30 November 2019, https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/energy-security-strategy#content-heading-2
- "*EU-Russia Energy Dialogue*," European Commission, accessed 6 December 2019, https://ec.europa.eu/energy/en/topics/international-cooperation/EU-cooperation-other-countries/russia/eu-russia-energy-dialogue
- "*Russia,"* European Commission, accessed 16 February 2020, https://ec.europa.eu/energy/en/topics/international-cooperation/key-partner-countries-and-regions/russia
- "*Speech by Commissioner Miguel Arias Canete at the 4th EU Energy Summit: International geopolitical uncertainties: brakes or accelerators for the EU energy transition?"* European Commission, accessed 28 May 2020, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_18_3242
- "*Third energy package,*" European Commission, accessed 21 May 2020, https://ec.europa.eu/energy/topics/markets-and-consumers/market-legislation/third-energy-package_en

Eurostat

- "*From where do we import energy and how dependent are we*?" Eurostat, accessed 27 January 2019, https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html
- *"Imports-oil-monthly data,"* Eurostat, accessed 4 March 2020 https://ec.europa.eu/eurostat/web/products-datasets/product?code=nrg_123m
- *"Imports-gas-monthly data*", Eurostat, accessed 4 March 2020, https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrg_124m&lang=en
- *"Solid fuels,"* Eurostat, accessed 8 March 2020, https://ec.europa.eu/eurostat/web/environmental-data-centre-on-natural-resources-old/natural-resources/energy-resources/fossil-fuels

News sites

- Bart Meijer, "Groningen gas output should be cut more quickly, says minister," Reuters, 22 May 2019, accessed 6 February 2020, https://www.reuters.com/article/us-

netherlands-gas-earthquake/groningen-quake-prompts-review-of-dutch-gas-production-plans-idUSKCN1SS0CC
- Editors, "Ukraine 'stealing Europe's gas'," BBC News, 2 January 2006, accessed 7 December 2019, http://news.bbc.co.uk/2/hi/europe/4574630.stm
- Joshua Yaffa, "How the Russia-Saudi oil war went awry-for Putin most of all," The New Yorker, 15 April 2020, accessed 31 May 2020, https://www.newyorker.com/news/dispatch/how-the-russian-saudi-oil-war-went-awry-for-putin-most-of-all

Other

- *Debate: "State of EU-Russia political relations,"* European Parliament Strasbourg 11 March 2019, https://www.europarl.europa.eu/doceo/document/CRE-8-2019-03-11-ITM-023_EN.html
- "*Energy in Europe- State of play,"* European Environment Agency, 10 December 2019, accessed 18 February 2020, https://www.eea.europa.eu/signals/signals-2017/articles/energy-in-europe-2014-state-1
- "*Energy is and stays geopolitics,"* Energie Podium, published 8 January 2020, accessed 21 May 2020, https://energiepodium.nl/artikel/energie-is-%C3%A9n-blijft-geopolitiek-gevoelig
- *Letter from the Government to the Dutch parliament concerning "the Dutch gas relation with Russia,"* 26 August 2016, accessed 30 January 2020, https://www.rijksoverheid.nl/documenten/kamerstukken/2016/08/26/kamerbrief-over-de-nederlandse-gasrelatie-met-rusland
- "*Primary energy consumption by fuel in Europe*," European Environment Agency, 31 January 2020, accessed 17 February 2020, https://www.eea.europa.eu/data-and-maps/indicators/primary-energy-consumption-by-fuel-7/assessment
- *"Russia,"* Energy Information Administration, last updated 31 October 2017, accessed 4 May 2020, https://www.eia.gov/international/analysis/country/RUS
- "*Russia's evolving gas relationship with the European Union*," Energy Post, 15 October 2018, accessed 28 January 2020, https://energypost.eu/russias-gas-relationship-with-europe/
- "*Royal Dutch Shell's expenditure on research and development from 2010 to 2019,*" Statista, last updated 23 March 2020, accessed 30 May 2020, https://www.statista.com/statistics/260315/spending-on-research-and-development-by-royal-dutch-shell/
- "*Speech: The state of play of EU-Russia energy relations,"* Europa Nu, published 25 March 2015, accessed 23 May 2020, https://www.europa-nu.nl/id/vjsjjrbvpiyy/nieuws/speech_the_state_of_play_of_eu_russia?ctx=via2fu30lxxr
- "*The pipeline*," Nord Stream, accessed 20 December 2019, https://www.nord-stream.com/the-project/pipeline/

Books

- Bachtler, John and Mendez, Carlos. *EU Cohesion Policy and European Integration: The dynamics of EU Budget and regional policy reform.* London: Routledge, 2016.

- Schaffer, Brenda. *Energy Politics.* Pennsylvania: University of Pennsylvania Press, 2011.
- Szulecki, Kacper. *Energy Security in Europe: Divergent Perceptions and Policy Challenges.* Cham: Palgrave Macmillan, 2018.
- Tichy, Lukas. *EU-Russia Energy Relations: A Discursive Approach.* Cham: Springer Nature Switzerland, 2019.
- Turksen, Umut. *EU Energy Relations with Russia.* London: Routledge, 2018.

Articles

- Franza, Luca, Linde, Coby van der and Stapersma, Pier. "The internal and external dynamics of EU energy relations." *International Spectator* Vol. 72 No. 2 (2018): 2-7.
- Georgiou, Natasha and Rocco, Andres, "The Energy Union as an instrument of global governance in EU-Russia energy relations: from fragmentation to coherence and solidarity," *Geopolitics, History and International Relations* Vol.9 No.1 (2017): 241-268.
- Goldman, Marshall. "Putin and the Oligarchs." *Foreign Affairs* November/ December (2004).
- Ivanenko, Vlad, "Russian Energy Policy and Its Domestic and Foreign Implications," *International Journal* Vol. 63 No. 2 (2008): 263-274.
- Paillard, Christophe-Alexandre, "Russia and Europe's mutual energy dependence," *Journal of International Affairs* Vol. 63 No.2 (2010): 65-84.
- Pierini, Marc, "Russia's Energy Politics and Its Relevance for the European Union," *IEMED Mediterranean Yearbook 2019.*
- Romanova, Tatiana, "Is Russian Energy Policy towards the EU only about Geopolitics? The Case of the Third Liberalisation Package," *Geopolitics* 21:4 (2016): 857-879.
- Siddi, Marco, "The Role of Power in EU-Russia Energy Relations: The Interplay between Markets and Geopolitics," *Europe-Asia Studies* Vol. 70 (2018): 1552-1571.

Reports

European Commission

- "An Energy Policy for Europe," 10 January 2007, accessed 4 December 2019, Commission of the European Communities.
- "European Energy Security Strategy," 28 May 2014, accessed 12 August 2019, European Commission.
- "Green Paper: A European strategy for sustainable, competitive and secure energy," 8 March 2006, accessed 1 December 2019, Commission of the European Communities.
- "Interim report on the follow up to the informal meeting of Heads of State and Government at Hampton Court," 7 December 2005, accessed 1 December 2019, Commission of the European Communities.

Other

- "Energy strategy of Russia for the period up to 2030," 2010, accessed 2 May 2020, Government of the Russian Federation.
- "Energy as a tool of foreign policy of authoritarian states, in particular Russia, April 2018, accessed 9 May 2020, AFET committee European Parliament.
- "Global and Russian energy outlook 2019," 2019, accessed 6 May 2020, Energy Research Institute of Moscow School of Management SKOLKOVO.
- "Towards a common EU energy policy? Debates on energy security in Poland and Germany," February 2016, accessed 20 December 2019, ESPRI.

Appendix

Table 7 European gas import from Russia in percentages 2005-2017

1) Share of imports of Natural Gas that originated from Russia per EU member state per year (%)

and

2) Contribution to total EU imports of Natural Gas per EU member state per year (%)

	2005		2007		2009		2011		2013		2015		2017	
EU Member state	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*
Total EU*	**35.0%**		**33.0%**		**28.0%**		**28.3%**		**32.6%**		**31.9%**		**36.2%**	
Austria	70.8%	2.5%	57.0%	2.5%	68.2%	2.6%	63.8%	3.1%	63.2%	2.5%	64.6%	2.9%	64.6%	2.9%
Belgium	4.9%	4.6%	4.5%	4.6%	2.9%	5.4%	0.0%	5.1%	0.0%	4.6%	0.0%	4.5%	0.0%	3.8%
Bulgaria	100.0%	0.8%	100.0%	0.8%	100.0%	0.6%	100.0%	0.6%	100.0%	0.6%	100.0%	0.7%	100.0%	0.7%
Croatia	100.0%	0.3%	100.0%	0.3%	95.8%	0.3%	0.0%	0.2%	0.0%	0.3%	0.0%	0.3%	0.0%	0.4%
Cyprus	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%
Czech Republic	76.1%	2.4%	78.2%	2.1%	65.4%	2.1%	97.0%	2.2%	100.0%	2.0%	99.8%	1.8%	99.2%	1.9%
Denmark	No data	0.0%	No data	0.0%	No data	0.0%	0.0%	0.2%	0.0%	0.3%	0.0%	0.2%	0.0%	0.1%
Estonia	100.0%	0.3%	100.0%	0.2%	100.0%	0.2%	100.0%	0.1%	100.0%	0.2%	100.0%	0.1%	100.0%	0.1%
Finland	100.0%	1.1%	100.0%	1.2%	100.0%	1.1%	100.0%	1.0%	100.0%	0.8%	100.0%	0.7%	100.0%	0.5%
France	19.7%	12.3%	13.6%	11.0%	15.7%	11.6%	13.5%	11.6%	19.5%	11.5%	12.8%	10.7%	18.7%	10.2%
Germany	40.6%	24.1%	43.4%	21.8%	33.7%	21.6%	36.7%	20.9%	40.9%	23.4%	42.6%	24.7%	52.3%	24.8%
Greece	84.5%	0.7%	77.5%	1.0%	56.9%	0.9%	59.8%	1.1%	99.9%	0.9%	61.6%	0.8%	58.2%	1.0%
Hungary	73.4%	3.1%	99.2%	2.6%	82.7%	2.4%	99.2%	1.9%	95.0%	2.0%	95.0%	1.6%	95.0%	2.8%
Ireland	0.0%	0.9%	0.0%	1.1%	0.0%	1.2%	0.0%	1.1%	0.0%	1.0%	0.0%	1.0%	0.0%	0.3%
Italy	31.8%	18.8%	30.7%	18.6%	28.9%	17.0%	28.1%	16.4%	45.3%	14.8%	45.1%	14.8%	47.5%	14.6%
Latvia	100.0%	0.5%	100.0%	0.4%	100.0%	0.4%	100.0%	0.4%	100.0%	0.4%	100.0%	0.3%	100.0%	0.3%
Lithuania	100.0%	0.8%	100.0%	0.9%	100.0%	0.7%	100.0%	0.8%	100.0%	0.6%	100.0%	0.6%	53.7%	0.5%
Luxembourg	4.9%	0.3%	23.5%	0.3%	24.0%	0.3%	24.0%	0.3%	25.2%	0.2%	25.3%	0.2%	25.3%	0.2%
Malta	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	0.0%	0.1%
Netherlands	19.3%	5.9%	18.2%	6.6%	14.1%	6.3%	8.4%	5.6%	14.1%	7.3%	19.6%	9.8%	17.3%	11.4%
Poland	66.0%	2.7%	67.7%	2.5%	82.0%	2.4%	85.5%	2.7%	77.1%	3.0%	72.5%	2.9%	65.6%	3.3%
Portugal	0.0%	1.1%	0.0%	1.1%	0.0%	1.2%	0.0%	1.2%	0.0%	1.1%	0.0%	1.1%	0.0%	1.3%
Romania	100.0%	1.3%	91.3%	1.2%	98.7%	0.5%	86.0%	0.7%	91.7%	0.3%	90.1%	0.0%	98.9%	0.3%
Slovakia	100.0%	1.9%	99.2%	1.6%	100.0%	1.4%	100.0%	1.4%	95.0%	1.3%	100.0%	1.1%	100.0%	1.1%
Slovenia	59.8%	0.3%	51.1%	0.3%	48.5%	0.3%	48.0%	0.2%	57.9%	0.2%	30.0%	0.2%	30.0%	0.2%
Spain	0.0%	9.0%	0.0%	9.2%	0.0%	9.0%	0.0%	8.3%	0.0%	8.5%	0.0%	7.8%	0.0%	7.2%
Sweden	0.0%	0.2%	0.0%	0.3%	0.0%	0.3%	0.0%	0.3%	0.0%	0.3%	0.0%	0.2%	0.0%	0.2%
United Kingdom	0.0%	4.0%	0.0%	7.7%	0.0%	10.4%	0.0%	12.7%	0.0%	11.8%	0.0%	10.9%	0.0%	9.9%

*Percentage of total EU imports of Natural Gas originating from Russia is the weighted average of EU imports

Table 8 European oil import from Russia in percentages 2005-2017

1) Share of imports of Crude Oil that originated from Russia per EU member state per year (%)

and

2) Contribution to total EU imports of Crude Oil per EU member state per year (%)

	2005		2007		2009		2011		2013		2015		2017	
EU Member state	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*
Total EU*	**24.0%**		**24.8%**		**26.1%**		**26.6%**		**27.7%**		**25.4%**		**25.2%**	
Austria	14.7%	1.2%	1.6%	1.3%	2.2%	1.3%	8.9%	1.4%	8.0%	1.5%	5.5%	1.5%	3.7%	1.3%
Belgium	27.5%	5.0%	31.6%	5.3%	26.5%	5.3%	29.8%	5.2%	29.4%	5.2%	25.5%	5.6%	33.3%	6.0%
Bulgaria	69.5%	0.0%	52.5%	0.0%	59.0%	1.0%	78.0%	0.9%	78.8%	1.1%	66.2%	1.0%	50.2%	1.2%
Croatia	62.3%	0.0%	69.4%	0.0%	66.9%	0.0%	46.6%	0.0%	48.7%	0.0%	20.5%	0.4%	12.0%	0.5%
Cyprus	1.6%	0.0%	0.9%	0.0%	0.0%	0.0%	0.1%	0.0%	1.2%	0.0%	0.2%	0.0%	0.3%	0.0%
Czech Republic	50.6%	1.2%	44.3%	1.2%	49.8%	1.2%	40.7%	1.3%	42.7%	1.2%	36.5%	0.0%	35.2%	0.0%
Denmark	9.9%	1.2%	7.6%	1.3%	3.4%	1.3%	12.4%	1.2%	14.2%	1.4%	32.8%	1.3%	21.8%	1.4%
Estonia	30.9%	0.0%	27.3%	0.0%	24.2%	0.0%	9.3%	0.0%	16.3%	0.0%	24.5%	0.0%	29.8%	0.0%
Finland	72.2%	1.7%	70.2%	2.0%	77.6%	2.1%	47.9%	2.2%	71.0%	2.3%	70.5%	2.0%	79.9%	2.2%
France	13.8%	13.6%	15.9%	13.4%	18.7%	12.6%	18.7%	12.0%	14.5%	10.8%	11.5%	10.4%	14.6%	10.4%
Germany	26.9%	18.0%	26.0%	17.4%	27.9%	17.1%	30.2%	16.3%	27.8%	16.4%	29.5%	15.4%	31.4%	13.3%
Greece	34.1%	3.0%	28.5%	3.2%	29.9%	3.3%	24.3%	2.6%	31.9%	3.5%	26.2%	3.9%	19.6%	4.1%
Hungary	78.9%	1.2%	80.1%	1.3%	78.0%	1.2%	84.6%	1.2%	77.1%	1.1%	59.4%	1.2%	42.7%	1.2%
Ireland	0.0%	0.5%	0.0%	0.6%	0.0%	0.5%	0.0%	0.6%	0.2%	0.6%	0.6%	0.6%	4.5%	0.6%
Italy	20.3%	13.4%	20.0%	13.9%	18.6%	11.8%	16.2%	11.9%	21.7%	9.9%	15.9%	10.8%	11.1%	11.3%
Latvia	14.9%	0.0%	16.2%	0.0%	12.7%	0.0%	15.8%	0.0%	14.2%	0.0%	22.0%	0.0%	24.1%	0.0%
Lithuania	94.4%	1.4%	88.4%	0.8%	94.2%	1.4%	88.3%	1.6%	85.6%	1.7%	69.6%	1.5%	61.8%	1.7%
Luxembourg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Malta	No data	0.0%	No data	0.0%	No data	0.0%	36.8%	0.0%	30.3%	0.0%	9.8%	0.0%	3.2%	0.0%
Netherlands	23.0%	8.0%	22.9%	8.0%	23.5%	8.2%	22.6%	8.6%	24.5%	10.3%	27.1%	10.6%	30.2%	10.6%
Poland	75.2%	2.8%	72.7%	3.3%	74.6%	3.4%	77.7%	4.3%	84.5%	4.3%	77.8%	4.6%	68.5%	4.3%
Portugal	0.3%	2.1%	0.7%	1.9%	1.3%	1.8%	3.6%	1.8%	10.2%	2.2%	8.5%	2.5%	22.2%	2.4%
Romania	49.7%	0.0%	48.3%	0.0%	28.6%	1.9%	19.6%	1.7%	35.4%	1.7%	42.3%	1.8%	40.9%	1.9%
Slovakia	78.9%	0.8%	82.6%	1.0%	81.9%	1.0%	82.5%	1.1%	81.3%	1.1%	78.2%	1.0%	74.0%	1.0%
Slovenia	1.8%	0.0%	0.3%	0.0%	0.4%	0.0%	1.0%	0.0%	0.8%	0.0%	0.4%	0.0%	5.5%	0.0%
Spain	13.9%	9.3%	18.6%	9.2%	14.8%	8.9%	14.3%	9.3%	11.8%	10.7%	7.4%	11.2%	5.7%	11.4%
Sweden	28.1%	3.1%	24.9%	2.9%	29.2%	3.2%	37.8%	3.4%	31.4%	3.1%	35.6%	3.5%	31.2%	3.4%
United Kingdom	8.3%	12.3%	12.4%	12.1%	9.3%	11.3%	10.5%	11.6%	10.5%	10.1%	8.3%	9.1%	11.7%	9.7%

*Percentage of total EU imports of Crude Oil originating from Russia is the weighted average of EU imports

Table 9 European Solid Fuels import from Russia in percentages 2005-2017

1) Share of imports of Solid Fuels that originated from Russia per EU member state per year (%)

and

2) Contribution to total EU imports of Solid Fuels per EU member state per year (%)

	2005		2007		2009		2011		2013		2015		2017	
EU Member state	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*	*1)*	*2)*
Total EU*	**20.7%**		**22.1%**		**26.0%**		**23.4%**		**26.6%**		**26.3%**		**33.8%**	
Austria	0.5%	2.5%	2.1%	2.3%	0.0%	2.0%	2.1%	2.1%	0.8%	2.0%	6.9%	2.0%	3.8%	2.5%
Belgium	10.2%	3.9%	14.4%	3.2%	4.6%	2.6%	1.1%	3.0%	21.6%	2.6%	25.8%	2.4%	27.7%	2.3%
Bulgaria	27.6%	1.8%	20.5%	2.0%	35.5%	1.4%	28.4%	1.5%	49.5%	0.7%	77.6%	0.6%	81.7%	0.5%
Croatia	30.8%	0.5%	28.2%	0.5%	25.7%	0.4%	0.0%	0.5%	17.3%	0.5%	58.7%	0.5%	77.3%	0.4%
Cyprus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%	0.0%
Czech Republic	1.6%	0.9%	2.6%	1.4%	8.2%	1.5%	6.3%	1.7%	1.8%	1.6%	2.4%	2.5%	3.4%	2.6%
Denmark	25.2%	2.6%	27.6%	3.2%	40.2%	3.3%	30.9%	2.8%	36.7%	2.1%	51.6%	1.4%	57.6%	1.7%
Estonia	100.0%	0.0%	100.0%	0.1%	100.0%	0.0%	100.0%	0.0%	96.6%	0.0%	100.0%	0.0%	100.0%	0.0%
Finland	53.5%	2.2%	67.6%	2.9%	75.7%	3.0%	71.5%	3.3%	68.1%	2.3%	57.5%	2.0%	63.4%	2.3%
France	4.3%	9.1%	5.6%	8.0%	9.7%	8.1%	13.6%	7.9%	15.7%	8.1%	17.4%	6.9%	26.1%	8.4%
Germany	18.4%	17.4%	17.7%	20.2%	23.1%	20.2%	19.4%	23.4%	22.2%	24.8%	26.7%	28.3%	36.1%	28.7%
Greece	58.5%	0.3%	67.2%	0.2%	78.2%	0.1%	16.6%	0.2%	16.1%	0.2%	64.2%	0.1%	90.0%	0.2%
Hungary	36.5%	1.0%	32.5%	1.0%	32.3%	0.9%	5.7%	0.9%	3.2%	0.7%	2.4%	0.8%	7.6%	1.0%
Ireland	0.0%	1.3%	0.0%	0.9%	0.0%	1.0%	0.0%	1.0%	0.0%	1.0%	0.0%	1.2%	0.2%	1.1%
Italy	4.4%	10.6%	3.2%	10.0%	6.4%	9.5%	11.8%	10.6%	20.9%	9.0%	20.0%	10.0%	34.6%	8.6%
Latvia	89.4%	0.1%	100.0%	0.1%	97.7%	0.1%	53.2%	0.1%	97.5%	0.1%	100.0%	0.0%	98.2%	0.0%
Lithuania	94.9%	0.1%	93.0%	0.2%	88.4%	0.1%	95.2%	0.2%	94.5%	0.2%	94.6%	0.1%	94.4%	0.2%
Luxembourg	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	7.4%	0.0%	7.0%	0.0%	6.1%	0.0%
Malta	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%	No data	0.0%
Netherlands	8.1%	5.7%	9.2%	5.6%	13.4%	5.9%	13.6%	5.4%	16.2%	5.6%	24.8%	8.6%	33.5%	8.2%
Poland	68.3%	1.5%	50.5%	2.4%	65.1%	5.3%	61.4%	6.9%	60.1%	4.7%	57.4%	4.3%	64.7%	7.3%
Portugal	0.0%	2.2%	2.6%	1.9%	1.5%	2.4%	0.3%	1.6%	0.3%	1.8%	0.1%	2.7%	5.2%	3.1%
Romania	38.0%	2.0%	38.3%	2.4%	30.1%	0.9%	22.7%	0.8%	21.4%	0.8%	30.3%	1.0%	44.1%	0.9%
Slovakia	34.9%	2.7%	30.7%	2.6%	29.5%	2.7%	22.0%	2.3%	22.9%	1.9%	27.8%	2.1%	27.2%	2.5%
Slovenia	6.3%	0.3%	2.6%	0.3%	4.1%	0.3%	0.9%	0.3%	0.3%	0.3%	1.2%	0.2%	0.0%	0.2%
Spain	17.1%	10.6%	11.3%	9.7%	11.6%	8.4%	11.7%	7.4%	17.2%	5.9%	21.3%	9.4%	26.0%	10.5%
Sweden	23.5%	1.5%	20.5%	1.4%	20.5%	1.0%	19.3%	1.5%	20.8%	1.1%	19.0%	1.4%	17.8%	1.5%
United Kingdom	39.9%	19.1%	46.8%	17.5%	49.0%	18.8%	37.9%	14.7%	39.2%	22.0%	35.7%	11.6%	42.1%	5.1%

*Percentage of total EU imports of Solid Fuels originating from Russia is the weighted average of EU imports